

The Ramakrishna Mission
Institute of Culture Library

Presented by

Dr. Baridbaran Mukerji

RMICL-8

6

2339

tactual, etc., vibrations to give the sensations of Light, of Sound, of Touch, etc. But if these activities are not effective individually the question arises, how can they be so collectively? Considering them merely as items of Motion which can be subtracted from or added to any total-sum of them, we are intellectually constrained to admit that each and every of the vibrations of the sensory-nerves is ineffective for sensation.

Here we, in fact, come upon a fundamental paradox in the case. We have to suppose that a number of those vibrations following in succession (using the only words available), and occurring groupedly with an approximation to simultaneity, operate in consciousness, though none of them can do so singly in their own instant activity. Does not this again suggest that in the unification, even in the case of a ray of light, or a note of sound, there is something not coming from the physical side? Regarded executively only, some at least of the vibrations to which the sensation refers, have always ceased to exist dynamically in the quantity supposed to be specifically required before the sensation is had. It seems, indeed, to be enough for consciousness that some vibrations shall be taking place within a certain period of time *after* others have done so. An appearance is suggested, so early as this, that the Executive System in these

utterly at a loss for the dynamical-conditioning of the Emotions; it is supposed that they get the primary prompting of their specific-conditioning from these very differences in the reaction of the grey cells. But if this be so, where is there left any motion uninterfered with for the conditioning of the Ego primarily? The significant conclusion which the whole of the facts finally brings us face-to-face with we may put thus,—that within the range of the modifications of movement given by the different senses, it is of no consequence to the actualisation of the Ego, what may be the manner or the sum of the motion current in the neurotic-diagram; nor do the reactions conditioning the Emotions interfere with the egoistic-actualisation continuing, or else, of course, the Emotions could not be had.

If it should be asked, whether it is not possible that the actualisation of the Ego is associated with activity in some special ganglia, the obvious reply is that it is hard to see how that helps the case. For, if the specifically-varied motion in the sense-fibres and their conjoining molecules has in some way to be connected with that other apparatus for actualising the Ego, in order that the modifications of the non-egoistic experience may be had, the inquiry returns afresh, how such a systematisation of motion is prevented from having all its dynamical effects,—that is, from running on? But, in the absence of such prevention,—the very

ings of which have been a little anticipated on an earlier page. It is not difficult to understand how the occurrence of blankly-straight lines in a pattern are advantageous when they occur in some orders; nor why a bit of colour, too staring by itself, may be pleasing in a composition of many hues. There is a certain minute degree of imperfectness perpetually happening at the junctions of our co-ordinations, owing to a margin of what may be called natural hap-hazard in things; here-and-there, consequently, come interpolations of nervous-fibrils which offer a fragmentary co-ordination of their own,—what was previously imperfection just fitting-in in such a way as to give the last completing touch to exhaustion of reminiscence in the nervous area then in use. It was, also, earlier suggested that in a series of continuous exertions, in following the intricate loops of contour and pattern, the consentaneous action of the muscles of the eye arrives occasionally at a stage when the delimitation of a right line, not exceeding the due length, stands for the highest economy of effort and reminiscence in the given time; and to miss that delimitation would be a loss of possible consciousness. The same thing holds good of all the other senses. It is not that the law in any way changes; the co-ordinations exemplify it with a variety which bewilders,—with a subtlety we cannot follow.

THE PROCESS OF HUMAN
EXPERIENCE

AN INQUIRY INTO

THE PROCESS OF HUMAN EXPERIENCE

ATTEMPTING TO SET FORTH ITS LOWER LAWS
WITH SOME HINTS AS TO THE HIGHER
PHENOMENA OF CONSCIOUSNESS

By WILLIAM CYPLES



STRAHAN AND COMPANY LIMITED
34 PATERNOSTER ROW, LONDON

All rights reserved

R.M.	ARY
Acc. No.	
Class	
Date	
St	
G.	
C.	
B	
C	

P R E F A C E .

THE writer of the following pages has a sad pleasure in mentioning that Mr. J. S. Mill and Mr. Lewes encouraged the earlier studies leading to them. The same acknowledgment of obligation has to be made, with not less emphasis, to Professor Bain,—happily still spared to philosophy. Among the conclusions arrived at, several of the chiefest diverge from the teachings of these thinkers, and they were necessarily aware that the fundamental views so tended. The fact strengthens the writer's grateful recollection of the interest they expressed,—the first date of which, in each case, goes back many years: so long has the book been in hand, for, since some of the opinions rested on reasonings which were said to be fresh, it seemed well to test them repetitively in lengthened experience.

The plan of the work being expository rather than critical, it was found not possible to cite authorities with enough frequency to mark the aid got from reading. As indicating that such help

was sought and gladly availed of, an Appendix names the authors principally consulted in respect of one chapter—that on Pleasure and Pain. (See Appendix B.) Similar catalogues might have been given in case of all the questions dealt with. But, besides any attempt at precise specification of that kind, anyone now inquiring into these subjects has to add that he finds himself thinking in an atmosphere where (in addition to the influence of the three names which have already had to be mentioned) the reasonings of Mr. Herbert Spencer, Mr. Darwin, Professor Huxley, Professor Tyndall, Mr. Matthew Arnold, Mr. Leslie Stephen, and a number of others, are in the air, affecting all his mental experience.

Perhaps it should be further said that hardly any reader will be more aware than the writer is that a variety of matters arising in the course of the work are slightly treated. In some of the instances, a partial explanation of this might be offered, if it would serve any use; in other cases, a lack of full knowledge only too effectively helped the resolve to keep the book within fixed limits of size.

What the work aims at, if we except three or four chapters in the earlier part, is not so much an exhaustive setting forth in detail as a larger coherency of fundamental statement within manage-

able limits. It is with the view of securing this, and not from arbitrariness, that two or three new technical terms are used,—“The Neurotic Diagram,” “Egoistic Actualisation,” and “Executive System.” By their aid, it is hoped, a broadly systematic exposition is got, making the process of our experience more intelligible by a set of related generalisations left to be applied by each one in the occasions of his own life.

The best way of indicating the chief matters as to which some widening of conclusions seems to result will be to summarise what the book mainly attempts:—

It seeks to make the occurings, the ceasings, and the rebeginnings, from time-to-time, of our own self-actualisation understandable by specifying the physical event on which egoistic subsistence depends—namely, a certain practical *coincidence* of activity in two or more sense-organs;—to give the working-rules according to which Pleasure and Pain determinately happen in our experience, together with a strict formularisation of a Law of Beauty;—to render more intelligible the mode of Memory, and the manner of our exercising Attention amidst the enforced vicissitudes of consciousness;—to trace definitely the apportionment of the conditioning and quantifying activity of the nervous apparatus

in respect of the Senses, the Intellect, and the Emotions,—thus ascertaining precisely where the mystical field of the Will begins, if there be such an interior faculty—namely, at the point of full use of pre-acquired structure; and, generally, by defining a calculable principle of Virtue, and critically estimating the higher phenomena of Conduct, to make out whether the Ego discloses any added causation while it is actualised, and what, in the light of the later physical knowledge, are the limits within which what is commonly spoken of as the higher experience authenticates itself as valid. This latter part of the inquiry, of course, includes such questions as whether there is any rational basis for Dogma, what warrant there is for Prayer, and whether or not the modern Positive Philosophy attempts unnecessarily to restrict the range of the egoistic-actualisation?

In all the reasonings, the new demonstrations of Physical Science, it is hoped, are fully taken up;—though that, the writer must hasten to add, is just the decisive issue which has to be left pending for the judgment of the reader.

LONDON, *January*, 1880.

C O N T E N T S.

CHAPTER I.

MOTION AND HUMAN CONSCIOUSNESS.

	PAGE
1. The word "Motion"	1
2. What are the Primary Data afforded?	2
3. The Consciousness-conditioning Apparatus	4
4. The Motion has to be "Specific".	6
5. Modern Re-interpretation of the term "Impression"	8
6. Organisation the Determining Process	10
7. More Detailed Statement of the Limits of our Consciousness	13
8. Absolute Effectiveness of the Conditioning Movements within their Range	15
9. Consciousness Occurring does not Affect the Executive Order	16

CHAPTER II.

LAW OF THE ACTUALISATION OF THE EGO.

1. Not an Inquiry as to the Ego itself	18
2. Do the same Movements to which the Sensations are referred Actualise the Ego?	19
3. Movements added in the Brain itself	20
4. Quantitative Variations in the Cerebral Reaction	23
5. Coincident Activity of an Associated Locomotory Apparatus needed for Effectiveness	26
6. Summary of the Evidence	28
7. Working-Rule of the Egoistic Actualisation	32
8. The Uses of the Law	36
9. The General Process of Consciousness	38
o. The Sanction of the Ego	41

CONTENTS.

CHAPTER III.

PLEASURE AND PAIN: THEIR WORKING RULES.

	PAGE
1. Two great Antithetic Feelings	44
2. Bearing of the Primary Laws of Consciousness	45
3. The Law of Pleasure	48
4. Summary Presentation of Evidence	49
5. The Law of Pain	54
6. Review of the Proofs	55
7. The Problems involved	60
8. The Sub-Laws of Pain	64
9. "Irrationality" of Pain in some Cases	68
10. The Process of Anaesthetics	73
11. Case of the Special Senses	74
12. Evidences of the Law in the Higher Phenomena	77
13. Restatement of the Views	78
14. The Causation at Work	79
15. The Crucial-Proof afforded by the Violent Emotional-Expression accompanying Pain	82

CHAPTER IV.

THE MECHANISM OF MEMORY.

1. Common Consciousness is Cumulative and Historical	87
2. Reminiscence Economical	88
3. There must be Repetitive Cerebral Activity	90
4. Intercommunication of Prompting Cues	92
5. Hypothesis serving to Explain the Phenomena	95
6. Facts Supporting the View	99

CHAPTER V.

THE NEUROTIC DIAGRAM.

1. Mode of its Formation	102
2. Continuous Fluctuation of the Diagram	104
3. Analogue Diagrams	106
4. Method of the Higher Elaborations	108
5. Application of the Views	112
6. The Overriding Efficacy of "Impressions"	114
7. Further Illustrations	116
8. The Neurotic Diagram and Emotional Expression	117
9. A Focal-Point in every Diagram	120

CHAPTER VI.

PROCESS OF ATTENTION.

	PAGE
1. What Attention Means	122
2. Power of Nullifying Occasions of Consciousness	123
3. Germ of the Power of Attending	124
4. Muscular Aids to Attention	125
5. The Higher Phenomena	128
6. Aggregation of Organic Activity needed for Consciousness	129
7. Partial Interference with Aggregation Sufficient for Nullification	131
8. Peripherally-Running Fibres can be Blocked at the Cerebral- Endings	134
9. Disabling Power of Cross-Cues	135
10. The Eking-out Power of Fragmentary Neurotic Diagrams	137
11. The Working-Rule of Attention	140
12. Attention need not be Perfect	141
13. Arts for Minimising Attention	144
14. Use of the Language-Faculty	147
15. How Excitement Acts	150
16. The Views applied to some Typical Cases	151
17. Pre-arrangements for Attending Possible	158
18. Morbid Phenomena of Attention.	160
19. Summary of the Results arrived at	160

CHAPTER VII.

LAWS OF THE SUCCESSION OF IDEAS.

1. The Mutation of the Neurotic Diagram	162
2. Rules of the Permutation	164
3. The Laws of Extent, Rapidity, and Convenience of Recall	178
4. The Real Significance of Contiguity, Resemblance, etc	180
5. Principle on which the Permutation proceeds	182

CHAPTER VIII.

THE INTELLECT.

1. It is a Further Kind of Consciousness	184
2. How this Critical Experience arises	185
3. The Distinction between Sensation and Perception	187
4. How is the Intellectual Consciousness Conditioned?	190
5. The Evidence	193
6. Man's Efferent Activity comes to represent the Cosmical Executive-Operation	197

	PAGE
7. Practical Interchangeability of Passive Impressions and Efferent Activities	199
8. Use of the Language-Faculty	202
9. Minimising Helps of the Intellectual Process	204
10. Logic, Induction, Deduction, etc.	206
11. Ultimate Glimpse of the Cerebral Mode of the Intellectual Phenomena	208
12. A Free Hypothetical Activity Possible	211
13. Verification	212
14. The Higher Operations of the Judgment	213
15. The Intellect and Emotion	215
16. Cognition and Relativity	217
17. The Great Abiding Intellectual Inference	219

CHAPTER IX.

THE EGO.

1. Restatement of the Law of its Actualisation	221
2. A Practical Test of the Law	227
3. What is Really Signified by these Facts	229
4. The Primary Self-Feeling	230
5. Invariable Accompaniment of Non-Egoistic Apprehension	232
6. Has the Ego Creative Power?	233
7. Does the Ego, when Actualised, add Special Phenomena of its Own?	236
8. The Ego's "Cognition" of Itself	237
9. Practical Inadequacy of the Single Division into Egoistic and Non-Egoistic	243
10. The Primitive Ego and a Reminiscently-Identifiable Personality	244
11. Self-Feeling and Narcotics, Intoxicants, etc.	248
12. The Ego has not Command of the Cues of its own History	250
13. The Mode of Dissipation,—the Use of Art	252
14. The Still Higher Egoistic Possibilities	254
15. Inter-Variability of the Egoistic and Non-Egoistic Dividing Limits	256
16. Hints as to the Cerebral-Mode of Literature and the Fine Arts	263
17. The Perfecting of Personality	264

CHAPTER X.

THE EMOTIONS: THEIR GENERAL MODE.

1. How they are "Conditioned"	267
2. Summarised Statement of the Evidence	270

CONTENTS.

xiii

	PAGE
3. How Civilisation moderates Emotional-Expression	277
4. Different Stages of this Conditioning of Emotion	278
5. The First Heightening-Complexity of Sensory Experience	279
6. The Step from the Pleasant to the Beautiful	281
7. Aggregation of Consciousness the Basis of Taste, etc.	285
8. Sub-Laws Relating to the Beautiful	286
9. The Principle of Association of the Feelings	292
10. Rule for Comparing and Estimating Different Ideals	294

CHAPTER XI.

THE REALM OF CONDUCT.

1. Egoistically-referred Activity	298
2. Emotions of more Value than Sensations	301
3. We have to avoid Pain as well as to seek Pleasure	303
4. Right Conduct implies Enlargement of the Egoistic-Consciousness	306

CHAPTER XII.

WILL: WHAT IT IMPLIES.

1. Two Meanings of the Term	310
2. Practical Relation between Bodily-Movement and Thought	310
3. The Executive-Effectiveness of Volition is Progressively Acquired	312
4. In the Lower Order of Volitions Ideation Stops	315
5. In the Higher Matters of Conduct the above Rule is precisely Reversed	317
6. "Aspiration" a Mystical Egoistic-Phenomenon	319
7. It is Affirmed that "Aspiration" is followed by Increase of Energy	324
8. Probable Size of the Alleged Increment and its Frequency	325
9. Conclusions to which the above Reasoning seems to Point	328
10. There is Partially-Calculable Repetition of Behaviour between the Willings	329
11. Further Consideration of the Mathematical Problem	330
12. The Evidence Supplied by Consciousness	333
13. In What Way, then, is Man Accountable for his Conduct ?	342
14. Covert as well as Overt Conduct	345
15. Are the Additions to Structure Natural Evolutions of Hyper-Natural Increments	346

CHAPTER XIII.

CONSCIENCE: ITS MODE.

	PAGE
1. The Germ of the Faculty	349
2. How the Sanctions of Conscience arise	351
3. Intricacy of the Neurotic Diagrams when Conscience is Active	353
4. The Progressive Developement of Conscience	355
5. The Relation of Will and Conscience	358
6. Explanation of "Averages" showing in Conduct	360
7. How the Conscience is finally Committed to Virtue	361
8. The Christian Doctrine of the Holy Spirit acting on the Conscience	364
9. Man left not Arbitrary, but a Moral Creature	366
10. Faith the Final Function of the Conscience	369

CHAPTER XIV.

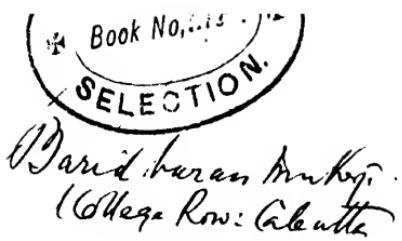
HYPOTHESIS OF THE "SOUL."

1. The Ego can only Indirectly Command its own Recurrences of Actualisation	371
2. Is not the "Body" all that is Needed for Purposes of Egoistic- Actualisation?	373
3. A First Rough Definition of the "Soul"	375
4. The "Soul" requires Prompting Cues	378
5. Summary Review of the Position	379
6. What is sought for is a Guarantee of Resumption AFTER this Life	381
7. What Evidence is there of Pre-habituatation of Apparatus?	385
8. The View seems to throw Light on the Egoistic Degradation seen sometimes in Age and in Disease	394
9. The Present Sensory-Experience must be Lost	397
10. Summary Restatement of the Hypothesis	399

CHAPTER XV.

FAITH: IS THERE A RATIONAL BASIS FOR DOGMA?

1. Organisation naturally Exhibits a Tendency to Further De- velopment	403
2. In what Mode can Dogmatic Verities be Apprehendable?	406
3. The Canon for Preliminarily Judging such Claims	412
4. Rules for Criticising the Dogmatic Averments in themselves . .	416



CHAPTER I.

MOTION AND HUMAN CONSCIOUSNESS.

§ 1. *The word "Motion."*

IN any inquiry aiming at being fundamental, the conception of Motion has now early to be put forward, if only as a kind of voucher for the ideas being modern. But, in the present case, we are met by it on the threshold necessarily. In using the word "Motion" to describe a specific feeling accompanying activity in our muscular apparatus, and, also, as naming certain compound sensory experiences we get of events around us, it is perfectly intelligible. At a certain last stage of thinking, however, it is apprehended that Motion is a complex, non-self-explicatory term; though at all points short of that final stage of thought, it has to be accepted as if it were simple and fully understood. It is the ultimate ratiocinative expression, and cannot be further explained.

Attempts are made to hint the fact of this primary difficulty of scientific statement by speaking of *Force*, the notion behind Motion, which seeks to include

both statics and dynamics, with the potentiality of interchange between the two. In this way, any mental possibilities there may be in the case are drawn upon by a challenge to push the intellectual process to the uttermost. But, practically, we repeat, the word "Motion" marks the limit of the phraseology publicly available in reasoning. By the conception for which it stands, the human intellect gets its enfranchisement, so far as its range extends, since for calculations as to the order of the happening of things which are verifiable in our experience, the idea is sufficient.

Already the Intellect has to be named, its mention advancing us, at the start, into the intricacy of consciousness. But there is no avoiding this anticipation. It is only by that special function of our consciousness that we can deal with the rest in any way of exposition; leaving the account of the intellect's own process to be attempted later. The experience of sensory consciousness in itself, as we shall see, gives no scope for ratiocination: what we are here inquiring into is the possibility of assigning the occurrence of the sensory events and vicissitudes causatively.

§ 2. *What are the Primary Data afforded?*

The first fact in the case with which the intellect can deal is that of consciousness beginning and ceasing,—taken in connection with the necessarily

related persuasion that man exists in a scheme of things which, in some mode or other, subsists during his lapses of awareness. This latter is a point which will be considered in detail hereafter. Further, while we are conscious, our experience diversifies into kinds. Postponing the consideration of the emotional and ratiocinative phenomena, we allude here only to the variations of sensation, those of the different senses, with their modifications; the experiences proper to each sense, as of hues in colour, notes in sound, flavours in taste, and so on. These are current vicissitudes of consciousness, minor beginnings and cessations of it, occurring within the larger collective, or egoistic, ones.

Very early we learn that these diversifications of experience, as well as the startings and stoppings of consciousness generally, are determined not by ourselves—at least, not in their natural, unartificially produced happenings. They are somehow imposed and prescribed. Moreover, the intellect, by its own proper function, comes to apprehend that a certain order discloses itself in these occurrences, one event following upon or grouping with another. The intellect's complete task is, from these data, to formulate working-rules which will explicate the arising and the ceasing of our consciousness, with the occurring of the diversifications of experience into kinds while it subsists.

In fact, the word "Motion," in the broad sense in which we are here using it, is a general name for the *Executive-Operation* prescribing and determining the events of our consciousness.

§ 3. *The Consciousness-conditioning Apparatus.*

Nothing would be gained for the purpose immediately in hand by trying to observe the strict genetic order of our experience. Our apprehensions of the above-named Executive-Order give us two great generalisations,—those of the human bodily frame and the physical universe. The latter is the larger, and the former is the minor operative system—the body, in our common experience, demarcating itself within the world, as well as showing inter-relation with it, being physically part of the universe.

In inquiring, then, for the conditioning-apparatus of consciousness, the first answer we get is,—that it consists of the physically-operating universe acting finally in-and-through the organisation of a human body.

Modern science has greatly extended our information on every side of the field of possible knowledge sketched so generally in those few words. But it will nearly suffice here to point specially to the progress which has been made in tracing the executive-operation intra-bodily. As just hinted, that is the last, deciding stage of the conditioning-

activity; within the body we get the operation of the universe practically summed up for the purposes of our experience. It is true that we cannot leave the extra-bodily, larger order out of account (the subject of reminiscence will be dealt with separately), and say that the machinery of the Nervous System which Physiology in its researches has disclosed in the body is the conditioning-apparatus of consciousness, for our organic frame is a portion of the cosmical system, and shares its destiny. The larger executive system is indispensable for the original prompting of the minor system,—that is, the bodily one. But in inquiring into the connection between Consciousness and Motion,—always understanding by that latter word the executive-operation,—it is obvious that it is all-important to track the operation's last stage. And that ultimate activity is intra-bodily, being found in the working of the Nervous System. The details of Physiology and Nervous Anatomy are, fortunately, coming to be included among the commonplaces of the higher education.

It is only necessary to recall the general result which has been made out, namely, that a nervo-cerebral system, with specific agitations set up and propagated in it, favoured by adequate blood-supply, etc., is needed for human consciousness. Further, that for every diversification of the sensory

and other kinds of experience, there is a determinate modification of activity in that nervo-cerebral system. In a word, it is through the arrangements of the sensory organs and the brain that Motion decisively takes effect in conditioning consciousness.

§ 4. *The Motion has to be "Specific."*

In what has just been said, it was necessary to the statement that the words "specific" and "determinate" should be used. The very facts of consciousness not being continuous permanently and of experience diversifying, point to this conclusion. Our self-actualisation has not a common, universal relation to the intellectually-inferred physical system of the world. This primary, most important limitation of human consciousness may be stated in more than one form of words.

First, we may say that Force, regarded ultimately, apart from its operating dynamically, does not give human consciousness.

Second, we may say that Motion in general—that is, dynamical operation irrespective of specific quantification—does not condition such consciousness.

The cerebral movements in connection with which our experience in its different kinds arises, must be particular activities, fulfilling certain requirements which we call laws, the activities answering only to

a part of Motion's inter-quantifications. In order for us to be actualised egoistically, there must be set up in the brain agitations of a certain quantity, and there have to occur fixed rapidities, sizes, and directions of movement in the sensory organs, specific for each sense and for every modification of the experience each organ conditions. In one sense-organ the vibration has to be horizontal, in another perpendicular: it is calculable that the speed of the vibrations varies greatly in the different apparatus, and in different fibres of the same sense-organ. At the last stage of this inquiry into the conditioning process of consciousness, the attention in a curious way nearly loses sight of Motion in itself, being fixed upon such merely mental classifications in respect of its occurrence as size, rapidity, and direction. Without permitting the statement here to involve itself in verbal puzzles by staying to ask how those can be causes, the point may be put thus:—

All the inter-quantifications of Motion excepting the specific movements here alluded to, are ineffective for the conditioning of human consciousness, and are, in fact, whenever they interfere with those particular quantifications, practically antagonistic to such consciousness, inducing fatigue, swoon, sleep, etc.

But it is necessary to state more particularly the grounds of some of the views above summarily put forward.

§ 5. Modern Re-interpretation of the term "Impression."

For instance, if we have not already used the great historic word IMPRESSION, it would not be possible to go on far without doing so. This term, however, is no longer rightly available without a certain reconstruing of it, which has been made necessary by modern Science. It is as correct as it ever was to this extent, that the activity of the sense-organs and of the brain has to be originally prompted by the larger, freer motions of the cosmical operations outside the body. In very large measure, too, those operations, from one moment to another, dominate and control the intra-bodily ones. But something else has instantly to be said.

The important fact must be noted, that, within our own physical organisation, and by means of it, the extra-bodily elemental activities are translated into very different rates, amplitudes, etc.

It is in connection with these changed motions, as modified by the human frame and existing only within it, that our consciousness arises. As we have already seen, it is in the nervo-cerebral system that Motion acts decisively in conditioning our experience. To put it concisely, if rather clumsily, what man may be said to be sensorially in contact with is his body, not the great physical world intellectually inferred as existing outside his body. With that larger sphere

of the Executive System he has, in fact, nothing to do sensorially: his sense-experience refers only to a set of dwarfed, retarded events, in some way answering to the larger, swifter ones. There can be no doubt of this. Light, sound, heat, etc., in our sensible experience of them, are not born forthwith from the agitations of the inter-stellar ether Science tells of,—they connect with the far more modest vibrations of the intra-bodily nervous substance as the latter takes on the former agitations at the peripheral limits of the respective sense-organs; or rather, we should say, as those peripherally-taken-on movements are delivered interiorly at what may be called the other terminals of the nervous system. In practice, that difference—if there be any—cannot be reckoned, and, by an intellectual calculation, the same in kind as those which ascertain the greater velocities, finer dimensions, etc., of the extra-bodily cosmical operations, it is now estimated that the transmissions in the nervous substance may be roughly set down at ninety feet per second. The enormous disparity between these figures and those calculated for the inter-stellar propagations need not be dwelt on.

Viewed in the light of modern Science, our sensory experience cannot any longer be said to come to us in any imaginable way of extra-bodily *impressions*,—it is seen to be manufactured, so to speak, intra-bodily. It would come somewhat nearer to what is now known

of the case to say that the conditioning of our sensations, instead of being referred to "impressions" supposed to connect directly with the large cosmical activities, should be referred to ORGANIC OPERATIONS cosmically prompted.

§ 6. Organisation the Determining Process.

This brings us face-to-face with the question of the process by which Motion interquantifies itself. For, of course, as was stated at the beginning of this inquiry, the human body itself is part of the universal Executive System. ORGANISATION is the name for the way in which the cosmical energy modifies its own operations—first, by a quantitative variation of elemental processes outside the body; second, by statical structure giving this intra-bodily further alteration of rate, amplitude, etc.

What is really at the bottom of the dispute between the materialists and the anti-materialists is the question whether or not organisation does something besides effectuate itself as structure and systematised movement? The contention of the latter party virtually is, that modern scientists assume mistakenly that organisation—that is, the inter-happening of structural statics with related dynamical activities—has some magic, accounting for the other facts of experience besides the occurrence of its own determinate movements and relations.

Looking at the question first in its larger, general aspect, Science has already done much in tracing the self-diversification of the cosmical energy, marking the points where it differentiates itself quantitatively, and then, by acknowledging and observing , influence of position, alters the style of its executive behaviour. In certain specific inter-juxtapositions, attraction turns into repulsion, molar motion becomes molecular, and *vice versa*; passing from general physics to chemistry, atomic composition heightens and degrades. To the consecutions of physical results occurring along the lines between these points of alteration of behaviour by inter-grouping differently, Science gives names: gravitation, heat, electricity, chemical affinity, etc. Everybody, however, now has assented to the conclusion that, no matter how variedly named, all this has to be regarded as only so much motion. In the course of the executive operations changes of statical structure develop, but the grand conclusion of modern physics is, that the quantity of force is a fixed sum, reckoning the proportion between statics and free dynamical activity as interchangeable and compensatingly equivalent. If we now pass to the minuter aspect of the subject, to the cases where the higher complications of those inter-happenings of statical structure and related dynamical activities occur, there is every reason for supposing that, if Science had attained

her ideal limits, it would be seen that organisation accounts executively (after the first primarily to-be-assumed natural stir of force) for its own subsequent occurrences—that is, the historical sequences of the details of structure, and movement related to it, would be traced. All this is hardly any longer in question.

Taken at the full it amounts to this,—that organisation, in and by its own process, where it gives the physical system of the human body, develops within that system occasionally the specific rates, volumes, directions, etc., of motion with the occurrence of which our consciousness happens.

Let it be added, that part of what is here said brings out clearly a minor deduction involved in the former conclusion as to Motion-in-general not occasioning consciousness; namely, this deduction, that inasmuch as consciousness connects with the dynamical activities of the human body—the statics of the bodily frame so far as they can be regarded by themselves, not occasioning consciousness, since we are unaware whenever the nervous system is not acting specifically—we find that not only does force, matter, energy, or whatever it is styled, not give consciousness from mere general activity or motion, but that our awareness does not at all arise from force, matter, etc., existing *statically*; the only use in this respect of statical arrangement or struc-

ture being to determine the dynamical activities giving the specific rapidities, volumes, etc., of motion connected with which consciousness arises. If it should be said that "statics" is only a relative term, all matter being in or of motion, the case still stands, that the systematisations of motion which in practice we name statics, do not connect with our consciousness.

The researches of physiology are very valuable as showing us the detailed apparatus which is required for the specific dynamics—namely, the intricate combination of osseous parts, flesh tissues, blood-supply system, nerve ramifications, etc.; but it must be distinctly kept in view that since nerves, ganglia, brain, etc., are framed and maintained by the specific grouping of equivalent quantities of force indifferently interchangeable, there is nothing in those names to help in the apprehension of the process of consciousness further than as detailing the arrangement for giving the special events of Motion.

• § 7. *More Detailed Statement of the Limits of our Consciousness.*

It will be worth while still a little more to amplify the statement respecting Motion-in-general not occasioning our consciousness, particular quantifications of movement being required. Modern Science, it has

already been mentioned, informs us that, for the different sensations, the propagations of energy must occur in precise ways and act upon the appropriate organs—that is, in case of one sense, the vibrations in the apparatus must be horizontal, in another sense-organ perpendicular, and so on; also, that the modifications of the specific sensation in each organ, as of colours in light, the notes in sound, etc., ask further variety of the activity in speed, amplitude, etc., obtained by an organic selection determined by structure. The organisation of the extra-bodily elemental force, as to which we spoke above, gives alterations of behaviour in the energy to that effect, which alterations we specify under the names Light, etc. But the further fact has now to be pointed out, that the kinds of our specific sensations fall short in number of the distinct alterations of what we have termed executive behaviour which we can and do intellectually infer in the cosmical energy. Organisation is inferred beyond the limits of our sensory consciousness. When activity alters generally from molar to molecular, we experience heat; but what special senscs have we answering to Magnetism and Chemical Affinity? None. Owing to alterations taking place at certain points in the *order* of the experience of the senses that we have, the intellect apprehends that there are other modifications of the executive-operation; but there is no

provision made in our organism for any kinds of sensory experience answering to them specifically. We, by this line of reasoning, again reach the conclusion that the mind of man falls short of being correlative and commensurate with force, matter, etc. : it is only in relation with a few fragmentary parts of the physical processes of the Executive System in which we are. At most we have some half-dozen kinds of sensation ; these are not sufficient to answer *numerically* to the changes of executive mode which intellectual apprehension tells us take place in the physical doings.

§ 8. *Absolute Effectiveness of the Conditioning Movements within their Range.*

Before going further, let us pause to point out, however, that the practical effectiveness of the select rapidities, volumes, etc., is absolute. By availing ourselves, through our volitional activities, of the modes in which, by means of organisation, energy is made to modify its own operations, it is possible for us to reproduce at will the rapidities, directions, etc., along with which the sensations happen. Sounds, colours, tastes, perfumes, etc., can be brought into being with full effectiveness by simply adjusting physical processes so as to ensure Motion's running its course in a specific way. Our executive power in the case is perfect. Mere repetition is not all that

is within our scope. The ability does not hold good of only one order of progression in the sequences ; the order within the range of its own law may be changed in every possible manner of detail. One colour, sound, taste, perfume, etc., may be mixed with another ; they may be intensified or weakened. Even new sensations for the eye, ear, palate, nostril, etc., may be created by a novel combination of the physical sequences. It is in this way impossible for us to say when the potentialities of these movements are exhausted. What is termed Civilization depends mainly upon this power of manipulating the sensory experience. .

§ 9. *Consciousness Occurring does not Affect the Executive Order.*

Now, another fact of great importance may be brought forward. Absolute as is the practical efficiency of the occurrence of these rapidities, directions, etc., in giving occasions for consciousness, the happening of egoistic awareness and our experiencing the specific sensations does not work any physical alterations or consequences in the movements in which those rapidities, volumes, etc., occur. There is neither increase nor diminution in the motion ; the rapidities, volumes, etc., simply follow the proper laws of physical movement. In a word, the Executive System, according to the calculations

of the intellect, takes no account whatever, either one way or other, of the happening of sensations, intellectual apprehensions, or emotions. The calculations of the executive doings have to be made just the same for the inferred-operations in the intervals of our non-consciousness as for the periods of our awareness. That is to say, Consciousness, in all its kinds, is, whenever it occurs, so much pure addition to the sum-total of being, that sum-total increasing and diminishing exactly as certain rapidities, volumes, etc., occur in the motion of the intellectually-apprehended Executive System.

The question of volition and its relation to this point will be considered separately in a later place. But reserving that special case, it may be taken as established that the movements in the sense-organs and the brain, along with which our sensating, thinking, and feeling occur, neither retard nor accelerate for such occurring; that energy does not transform differently or omit any of its changes of executive behaviour, when or while consciousness happens. The physical and chemical changes go on in the same modes, observe the same order, and give the same quantitative results as if no sensation, thinking, feeling had arisen. Whether this is so in the one excepted case of volition, we repeat, has to be inquired into independently.

CHAPTER II.

LAW OF THE ACTUALISATION OF THE EGO.

§ 1. Not an Inquiry as to the Ego itself.

IT is not intended here to consider the Ego itself; that is, to distinguish the limits of the egoistic consciousness proper from the non-egoistic, or to classify the purely egoistic phenomena in any way. The appropriate place for that task will be much later. What is now proposed for inquiry is the law governing the actualisation of the Ego; in other words, an endeavour to fix the point of the intellectually-inferred Executive Order where human self-awareness arises. A very little reflection will suggest that this was not done in the preceding chapter: the rapidities, volumes, directions of motion there chiefly spoken of were those to which the sensations—that is, the specially non-egoistic experiences—are referred. Those movements could only be supposed to include the conditioning of the Ego by assuming that the Ego is actualised by the same motion which conditions the non-egoistic experience. That is, really, the first question now to be raised.

§ 2. *Do the same Movements to which the Sensations
are referred Actualise the Ego?*

Obviously, the Ego has to be actually subsisting when the non-egoistic phenomena are experienced. Viewed, however, as they appear in consciousness, there is no question of priority between the non-egoistic and the egoistic sentiency. The two are always simultaneous; we become self-aware by apprehending something else sensorially. This only says that the actualisation of the Ego and the conditioning of the sensory experience result from a related systematisation of motion. In the cases where the sensations are "impressional,"—viz., are conditioned by movements taken on peripherally,—the activities giving the occasions of the sensory experience are in existence before the Ego is actualised in respect of them. It has been clearly made out that we have no consciousness actualised by movements in the nerve fibres prior to the agitations reaching the brain. On the other hand, the motion conditioning the *reminiscent* sensory experience in dreaming, imagining, etc., largely originates in the brain, and is maintained there by cerebral interactivities. Is it open to us to say, that, in those latter instances, the movement for actualising the Ego in respect of that experience is in existence before the sensations are conditioned? It is a point which need not be dwelt upon; the move-

ment affording the occasion for the necessarily conjoint experience of the Ego and something which is apprehended as non-egoistic is in some way a totality, and must exist in its entirety to be effective. The important fact to be noted is, that it can be constituted and worked, so to speak, each way,—either, as peripherally prompted, or as cerebrally supplied.

This at once suggests that the sensory fibres are not all the apparatus concerned in the conditioning-movement. The sensory experience is decided, delimitated, determined by the activity of those fibres: in so far as any groupings of them, from disease or other cause, fail to act in a particular case, there is exactly corresponding defect of the possible sensation. But that those fibres are not *individually* effective for the actualisation of consciousness, there can be no doubt. From what Nervous Anatomy has taught us of their minute dimensions, it may be held as demonstrated that the *minimum visible*, the *minimum tactile*, etc., comprises in its area the activity of very many sensory fibres. There is in some way, even for the non-egoistic experience, *grouping* of the activity at the cerebral endings of the fibres.

§ 3. *Movements added in the Brain itself.*

In what has so far been said, the question has been kept restricted to the sensory process. If we take into account the other forms of consciousness,—that

is, the intellectual, emotional, and volitional phenomena,—there is abundant proof that the brain has the power, by means of its own intra-cranial structure, of *multiplying* movement. At some moments of our experience, as will be better seen further on, the proportion which the peripherally-started motion bears to the total of the current cerebral activity, is very small. Examples in plenty lie ready to the hand. If we see the form or hear the voice of one whom we either love or dislike, the mere optical or auricular nervous agitations are a very small portion of the movements which very shortly ensue in the brain, etc. Or take the case of reading a book, or hearing some one else read it. The sight of the letter-forms, or the hearing of the verbal sounds, can challenge all the ratiocinative processes, and all the styles of feeling. The activity of the fibres connecting with the eye or with the ear, set in progress the cerebral motion, but all the movement in excess of those peripherally-prompted transmissions is added by what may be termed *cerebral reactions*, successively and reciprocally coming into play. It is, indeed, now known that in every instance where what is named "perception" occurs, the bulk of the conditioning-motion arises in the brain in this multiplicatory manner. And it is patent, as above mentioned, that the activities in connection with which the intellectual, volitional, and emotional consciousness occurs, are
2, 339

added cerebrally. It is known how the additions are made. The brain largely consists of cells and ganglionic masses, in addition to the fibres, the latter always terminating in the former; and it has been ascertained that these distinctively cellular portions are magazines of force which the agitations of the fibres can prompt into activity,—increased propagations being thus transmitted from one point to another of the brain. How the special sense-organs are constructed, and where they are located, was long since ascertained. Even beyond that knowledge, some way has been made—without reckoning the too hasty generalisations of Phrenology—in discovering the collocatory arrangements for the more general use of the brain in the higher processes of consciousness. It is held possible, by means of generalisations founded on cases of disease and of experiment, to assign in a rough, defective way some of the parts of the brain which must interact for the conditioning of specific ratiocinative and emotional phenomena. But this is not exactly the point we have now in hand; rather we are preliminarily inquiring whether or not the mere actualising of the Ego at the very simplest stage of our experience, that of sensation, implies a cerebral reaction prompted by—but at the same time added to—the sensory-conditioning movements? The whole of the facts answer this question in the affirmative: for consciousness to subsist, there must be

activity in the cerebral cells as well as in the fibres of the special sense apparatus.

§ 4. Quantitative Variations in the Cerebral Reaction.

This peripherally-prompted cerebral reaction with which the egoistic actualisation is associated is necessarily a hidden intra-cranial one. How can we learn anything of its quantification, its rate, its volume? We are able to say this,—that it appears the motion conditioning the Ego can be prompted by any of the rates, directions, volumes taken on peripherally by any of the sense-organs at the times when “impression” becomes effective. A touch, a shout, the changes of heat or cold, can alike arouse us into consciousness. Clearly the sum-total of the conditioning-activity, reckoning both the cerebral-reaction and the peripheral propagations in the special sense fibres, undergoes enormous fluctuations from one moment to another of our experience, according to the number and the grouping of the sense-organs in play and the intensity of their activity.

Further, in the ordinary cases of prolonged consciousness,—that is, of the usual continuous experience of the wakeful hours,—there is shown perpetual interchangeability of the actualising movements. It comes out more obviously during wakefulness, but the same thing, of course, occurs in dreaming. The particular sense, be it the eye, ear, or whichever other organ,

by means of whose activity we were challenged into consciousness, may cease to operate effectively, the sight, the sound, etc., fading out. But if another sense-organ has, in the meantime, come into effective activity, there is no lapse of the egoistic awareness.

The conclusion to which these facts point may be put thus :—

The egoistic actualisation can be and is sustained in and through non-coincidence and discontinuity of all the effective sensory activities taken separately,— alternation and succession of these motions substituting or compensating continuity of the same sensory activity, provided only that there be chronological overlapping in the alternation and succession, securing against the cessation of all the effective kinds of sensory activity.

In these different ways there must, we repeat, be unceasing variation alike in the quantity and the configuration of the movement conditioning the Ego's actualisation. But we need not follow up that point now; what we are here inquiring after is the *minimum* of sensory-cerebral activity which is effective for that end.

Can it be assumed that the activity of one sense-organ is sufficient to actualise the Ego? It does not require much pondering to suggest diffi-

culties in the way of this easy solution of the problem. Each of the senses is always being peripherally acted upon: the skin never fails to be in contact with something, there is no door to the passage of the ear, light can penetrate the eyelid when dropped, and the temperature of the air surrounding us is ever rising or falling. Already we have spoken of a *minimum visible*, a *minimum tactile*, which afresh reminds us that the sensory motion, in order to be effective for the actualisation of the Ego in respect of the "impression," has to be specific. This limitation, however, does not hold good within the area of the impression when the *minimum visible* or *minimum tactile*, etc., has constituted itself effectively. Once an impression becomes effective as a sensation, we are cognisant of it throughout all its extent, though it is possible that a minute subtraction from that extent would nullify the sensation altogether. The point raised here is one to which we shall have again to revert later; but we at once put it forward as showing that the *minimum* of effective activity in any of the sense-organs does not depend upon mere peripheral extent of impression. Nor is it simply a question of intensity, volume, etc., in the nerve agitations. All the curious facts classed under the name of ATTENTION come in to establish these conclusions. Everybody knows that we can have eyes wide open in broad daylight without

seeing, that the ear may be fully vibrating without our hearing, and so on, through the whole range of the senses. It is not possible to make the subject fully intelligible in detail before inquiring into the cerebral machinery of Memory and ascertaining the Laws of Attention. But this general conclusion can be forthwith made out,—that our experience shows from instant to instant the practical observance of a working-rule by virtue of which the peripherally-taken-on rapidities, volumes, directions, etc., which are capable of constituting the *minimum visible*, *minimum tactile*, etc., may occur in the sense-organs without necessarily connecting with the egoistic actualisation. We are continually in our ordinary regular experience becoming oblivious with respect to—or rather we should say ceasing to have, or not beginning to have—sounds, sights, touches, etc., the physical occasions of which are actual, but which fail to challenge the Ego.

If we can discover the working-rule according to which this happens, we shall in it necessarily attain the Law of the Actualisation of the Ego.

§ 5. *Coincident Activity of an Associated Locomotory Apparatus needed for Effectiveness.*

The hypothesis we are led to submit is as follows:—That no sense-organ, regarded singly, is able to render in consciousness the experience belonging to

its organic activity, or, in other words, to actualise the Ego in respect of itself, unless there occurs in association with the propagations a related locomotory-activity physiologically provided for in respect of each sense-organ,—the cerebral reaction on which the actualisation of the Ego depends requiring for its effective challenge simultaneous activity in fibres of, at least, two senses propagating their transmissions in the brain-cell to which such fibres run,—the locomotory-activity securing that.

If this view can be established, then we are able, by a kind of side-stroke, to frame an initial Law of Consciousness, by fixing upon the fact of there having to be *coincidence* of movement in the fibres of at least two senses; in other words, the fact of its being necessary for the Ego conditioning-activity to be associatory, compound. The executive *event* upon which our actualising depends will, in that case, have been made out. A foundation would be also afforded by such a generalisation for attacking the mysterious problems of Attention; since, according to that hypothesis, a volitional manipulation of this association of the locomotory activity, in such ways and modes as would amount to practical disjunction of its co-operation with the special senses, is all that is needed to give the possibility of *nullifying*, within certain limits, the actualisation of egoistic awareness at any point in respect of any organic

activity which would otherwise be effective for sensory or other experience.

§ 6. *Summary of the Evidence.*

The question, however, is—What is the evidence to be brought forward in support of this view?

First of all, we may recall the fact of its being clearly demonstrable that consciousness only arises in the brain; in other words, it only occurs in that part of our apparatus where provision is constructively made in the cerebral cells and adjacently ending peripheral fibres for a conjoint effect being dynamically produced by two or more sense-activities. Further, it cannot fail to suggest itself, that, in every act of sensory experience, there is detectable, in the very facts of such experience being localised and defined, the presence of a mixture of the consciousness which belongs to the muscular sense. It is, also, matter of the commonest observation, that when we fail egoistically, becoming wholly or partially unconscious from fatigue, exhaustion, etc., the senses are still effective if we can by volition force the locomotory apparatus in connection with them to rally and act. Moreover, the phenomena of intoxication, the effects of some poisons, or even changes of temperature, and the operations of anæsthetics, lend themselves to the conclusion that a disabling of the muscular machinery carries with it incapacitation of

the other senses. Then, everybody practically recognises the way in which exercise, habituation, training, sharpens the activity and increases the efficiency of all the senses; while it is apparent that such exercise, habituation, training, really means a finer working, a more optional volitional control of the muscular, or locomotory, machinery for adjusting the special sense concerned. Finally, we believe it will be shown when treating in detail of Attention, that immobility of the locomotory apparatus connected with the different senses, no matter how slight or momentary it may be, arrests experience in respect of the sense. Fix the eye, and, if you do it completely, you cease to see; give over altering pressure laterally, and the sense of contact stops.

But, it may be asked, is this not assuming that there are locomotory fibres interadjusted with the organic apparatus of each and all of the special senses? Very likely, too, it will occur to some, that we may arouse from sleep, swoon, etc., suffering pain or discomfort. A moment's reflection will assure anyone that we cannot be aroused *by* pain, for neither pain nor pleasure has any existence but as a fact of our consciousness. You must be egoistically aware in order to have either of those feelings. An attempt to set forth the Laws of Pleasure and Pain is made in the next chapter. Here it is only necessary to clearly apprehend that internal movements of the

bodily frame, in the associated activities they give, have just the same power of conditioning the Ego as have the peripheral challenges taken on extra-bodily. To become, in suddenly awaking, conscious of a cramp, of smart, or of nausea, etc., betokens, as can be intellectually inferred, prior internal activity implicating the apparatus associated with our experience of heat, cold, distortion, etc. It is easily seen in one way or other to give the operation of the muscular activity in connection with some special sense-organ. Plainly, without such conjoint activity we cannot be aware of our own bodies, much less in any way, however vaguely, assign locality in the frame to the ill-feeling. 2,339

In ordinary cases of awaking on the mere lapsing of sleep, obviously there is the resumption of operation by the sensory activities of the frame in the usual associated way valid for giving egoistic consciousness. Whenever we are aroused by accidental shock, or by summons from another person, it will be found that there has been associated-activity. Touch, for instance, clearly prompts this. In the lightest naked contact which is effective, there is displacement to some extent of bodily substance, appealing to the muscular experience, even if the nerves giving sensations of heat and cold are not affected, as well as the special sense of touch; in the heavier pushes, shakes, pulls, locomotory activity ob-

viously is largely caused. If sound is used as the means of awaking a person, the physical vibrations set up imply the enforcing of movements in the machinery of the ear in some way equivalent to locomotory activity, as is shown by sounds being more or less localisable.* So, again, as is said above, in the case of heat and cold, there is the same equivalence; for there is actual expansion or contraction of tissue. In smell there is movement of the nostril; in taste there is always a degree of pressure. Associated-activity will be found in all the cases when they are closely looked into.

It answers the needs of the case, so far as accounting for the facts of Attention (which seem absolutely unintelligible on the basis of activity in one sense sufficing for the actualising of the Ego), if we assume *coincidence* in any two of the senses. But it is certain that in the instance of all the special senses, there is connected with their effective activity locomotion more-or-less of the apparatus, be it only by contraction or expansion under the influence of a change of temperature; and, further, as before said, in the time-and-space relations which more or less plainly accompany all our experiences, hints are given of the presence, along

* Mr. Darwin surmises that our progenitors moved the external appendage of the ear. Certainly all animals showing great fineness of hearing do so now.

with the other sensations, of that of the muscular activity.

The question formally arises—Is there a possibility of the muscular activity actualising consciousness without association on its part with movement in the fibres of another sense-organ, which movement unavoidably secures a joint dynamical effect in the brain? By way of answer it may be pointed out that the allotment of the special sense-organs in the bodily frame,—in particular the spreading of the apparatus of touch over nearly the whole external superficies, with the partial extension of it internally, in the mouth, etc.,—makes it impracticable for the muscular apparatus (except when acting below the *minimum* fixed by the Law of Effectiveness) to act isolatedly. There are few movements which do not, by contraction of the skin at some point, bring the sense of touch into play. In the very act, too, the muscular operation appeals to the sense of temperature; which, again, by causing, or, as we may better say, working contraction and expansion of substance, implicates the muscular sense.

§ 7. *Working-Rule of the Egoistic Actualisation.*

A rough statement of the working-rule of the egoistic actualisation may now be attempted thus:—

The Ego is actualised whenever due nervous agitations in the fibres of any two or more of the sense-organs reach the brain in association, implicated by

activity in the locomotory apparatus of the sense-organs or bodily part; it being made out by anatomical research that fibres from different sense-organs are naturally made to give coincident activity by locomotory machinery connecting with the same brain-molecules, or with a grouping of such molecules standing for the unit of consciousness, so that the fibres necessarily have, when acting simultaneously, a conjoint dynamical effect in producing in such molecule, or molecules, the cerebral reaction which is the specific motion along with which the actualisation of the Ego chronologically occurs; our egoistic actualising connecting with the activity of the central molecules, and the sensations experienced at the time being determined according to the fibres of whichever sense are operating in association with the molecules,—the sensory non-egoistic experience showing vicissitude as variations happen among the associated-activities of the peripherally-running fibres.

In this formula, we repeat, only the very simplest definition of the actualising process is attempted; for the systematised cerebral motion is able, when the right habituation has secured effective agreement (which habituation is attainable owing to the central, or, as we may call them, the egoistic, molecules having outwardly-acting efferent fibres forming the volitional apparatus, running downward from them), to take into its grouped activity, as added parts

of it, the vibrations of further sense-organs,—two of these, associated by the muscular activity, being only the *minimum* number. Also, it has to be assumed on the basis of the gradually accumulating evidence furnished by cerebral pathology and nervous anatomy, that a further elaboration of the systematised-motion takes place in respect of our intellectual sentiency; fibres running from the molecules of the sense-organs to special cerebral ganglia; which, again, have inter-connections with each other and—through the volitional machinery—with the Language apparatus.

But in all the cases, no matter how elaborate becomes the inter-grouping of the cerebral motions, this primary law of the actualisation of the Ego is seen: there must be associated sensory activity, either peripherally-prompted or reminiscent, for if the experience subtilises, intellectually and emotionally, till the sense-definitions fade, we find the egoistic actualisation begin to fail, consciousness dying out. Within that limit a multiplicatory enlargement of the sensory and other experience takes place, answering to the increase in the number of senses, etc., so conjoinedly acting; but the egoistic consciousness—that is, our self-awareness—is adequately conditioned whenever two senses and a related muscular-apparatus act simultaneously, in association with a central molecule or group of central molecules.

When consciousness is being carried on reminiscently, and when we are sustaining experience internally in ratiocinating, etc., the molecules—by virtue of their standing arrangements of construction and of habituated connection necessitating it—work the fibres in this associative way. This very important part of the inquiry will be dealt with separately; it is enough here to reaffirm the above statement, that associated sensory activity is never absent from our consciousness, in any of the modes of that consciousness.

Whether shall preponderate the feeling of self or the apprehension of the not-self—these two elements being very variable—is determined, in the first grade of consciousness, by the number of senses acting with simultaneity: the fewer they are, the more the experience is that of self; the more numerous they are, the more the not-self dominates. In the higher grades of consciousness, where the intellectual, moral, aesthetic phenomena arise,—the senses then acting reminiscently and taking on a symbolical style,—the rule will require restating with other provisions added; but in so far as the mere actualising of the Ego is concerned, it is the same rule.

A distinction, too, must be made between the simple Ego and a reminiscently-identifiable personality, the latter implying the exact recurrence of definite memories and a certain complexity of egoistic

actualisation, the detailed statement of which could only be attempted in a full consideration of the Ego. Here, we are but inquiring as to the Initial Law.

§ 8. *The Uses of the Law.*

If it now be asked what are the uses of the Law, above put forward, the answer is, that it helps in these ways :—

First, it gives a hint of what may be called the constitutive-dynamics of the cerebral activity which conditions egoistic consciousness. If the fibres of two sense-organs—made to coincide in activity by the muscular apparatus bringing always a second sense into play—have simultaneously to agitate a cerebral molecule, or a group of them, a suggestion obviously presents itself of the possibilities of polarity being brought into play in challenging and discharging the reaction of the molecule. Or, keeping the statement as simple as possible, it may be supposed that even multiform activity of fibres in the same sense-organ is not sufficiently strong, or not adjusted in the right way, to effectively challenge the reaction of the cerebral molecule,—a certain collective operation got from massing the fibres from two apparatus in specific positional-arrangement being required for that; the quantitative motion of the individual fibres in the different senses, in fact, not being adapted for that end, but

for another purpose, namely, the establishment and maintenance of the distinction in our consciousness between the egoistic and non-egoistic experience. Let it be remembered, too, that this inner-reacting movement seems, in connection with every act of consciousness, to be determined to an outward propagation into the volitional-machinery of the efferent nerves. There appears a strong likelihood that at least two separate and specifically-adjusted groupings of fibres may be required to be simultaneously active to effectively prompt a reaction of the cerebral molecule in that way.

Second, the law has a general use of this kind :— If it be established that simultaneity of sensory activities is needed for the occurring of consciousness, then, although a strict quantification of the Ego-actualising-operation is, as we have seen, impracticable, still the above formularisation is a primary affirmation made, however indefinitely, in the language of quantity, which modern Science will alone listen to as intelligible ; and thus there is gained a starting-point for a Psychology stateable, as to its physical aspect, in terms of motion.

Third, it further has an explicatory bearing on the old metaphysical categories, not only in the way of substituting for them a working-rule basing on Physiology, but as showing the very fact underlying those shrewd old empirical generalisations about

space-and-time relations necessarily accompanying our experience. They do so because the muscular activity is implicated in every dynamically effective operation of the other sense-organs. In the same way, the law throws light on some facts which have puzzled later thinkers in connection with the modern doctrine of Relativity.

Fourth, as was earlier pointed out, it gives a fundamental hint as to the process of Attention, making intelligible the practical nullification of activity in the special-sense fibres which is continually taking place in our experience.

§ 9. The General Process of Consciousness.

Let us finally see how the hypothecated working-rule fits in with the general process of our consciousness. In the furthest final moment of reverie, as also when self-awareness is only beginning in the first instant of awaking, this associated-activity is necessarily faint; but it heightens as we become self-aware. It is easy to see, under this view, why the sensory experience should be faint in the very first stage of the beginning of consciousness, and in the very last stage of its ending. The Ego has to be actualised before we, so to speak, can experience the sensations, and we cease to experience them as its actualisation fails. Thus the egoistic consciousness might almost be said to begin first and survive last,

though that is not the order of the cerebral motion when there is peripheral prompting. In a word, consciousness always subsists when, and only subsists while, this specifically-systematised motion occurs ; it not signifying whether the movements are prompted peripherally or supported internally in the way to be set forth more in detail when explaining the mechanism of Memory. On the other hand, so soon as by shock from accident, failure of blood-supply from weakness or weariness, or by recourse to the means for inducing mesmerism, etc., or the use of anaesthetics, sedatives, etc., the associatory-activity of the senses is deranged or stopped, so that there is not coincidence in challenging the cerebral reaction, causing it to give the specific systematisation of motion required, we become unconscious.

Though in this endeavour to apprehend the primary law of human experience, we still postpone any entering in detail on the higher elaborations of its conditioning, one remark may just be repeated, viz., that modern thinking is growing more-and-more familiar with the assumption, that for every differentiation of consciousness, there is a specific alteration in the sum of the rapidities, volumes, directions, etc., of cerebral motion chronologically associated with it. This necessarily makes the brain a very complicated apparatus for producing differential motions by means of internal reactions,

for we have several distinct styles of consciousness. A brief summary of the styles may be given in very few words. Besides the indispensable self-awareness and the sensory phenomena in their varied kinds, our experience includes the apprehending of a regulative order in the happening of, the egoistic actualisation and of the sensations, enabling the predicting of their occurrence. This is a positive addition to consciousness, giving a style entirely differing from the sensory, the name for it being the intellectual; and that, in turn, being helped further by the volitional activity we have, leads to the emotional style.

In our consciousness, therefore, four styles have to be recognized—1st, the egoistic, a self-awareness which accompanies and includes all experience; 2nd, that of the sensations, which we are led to refer on one side non-egoistically, but which, of course, is included in the Ego's awareness; 3rd, the intellectual apprehensions of the Executive System which furnishes the occasions of those sensations, transacting, so to put it, the non-egoistic happenings; 4th, the feelings arising from the intellectual apprehensions and in the promptings and doing of our own voluntary activity,—it being alleged by some that this style of consciousness, owing to certain responses which it finds made to it in Conduct, rises into a moral and spiritual sphere.

Anything which can be made out as to the executive events which specifically condition this elaborating of our experience, must be deferred till we are dealing with those higher kinds of consciousness. It is enough here if we have hit upon the first in order of those events, namely, the one determining the actualisation of the Ego itself in its simplest mode.

§ 10. *The Sanction of the Ego.*

If before turning from this part of the inquiry, it is, however, insisted upon that something more explicit shall be attempted to be said as to the causation actualising the Ego, the case, it would seem, may be restated thus:—

The limitations disclosing themselves in our experience show, as matter of fact, that our consciousness cannot—that is to say, it does not—subsist along with all the intellectually-inferred operations of the executive-activity of the physical world, self-awareness only arising when and while certain of those operations are occurring. The point really at issue is as to the *coincidence* chronologically of our egoistic subsistence, etc., and the occurrence of these specific operations of the physical world—our bodily frame being reckoned as part of that world.

This coincidence can only be supposed to arise in one of these two ways:—

1. If there be an entity of Mind no less than of Matter, that is, something we call Mind continuously existing despite intervals in our own consciousness, it must be so limited as only to be able to give the egoistic and other experience in and during opportunities for it which happen at the times above named,—being, in fact, *held in check repressively*, so far as mundane experience is concerned, by the causation operating the activity of the physical world, which in so far disqualifies Mind at all times save those when the specific executive event occurs which we have termed the primary cerebral reaction; Mind then succeeding in asserting itself in a necessary unfolding of potentiality, temporarily giving our consciousness as so much addition to the sum total of mundane being while such consciousness subsists.

2. If, on the other hand, there be no entity of Mind continuously existing in our case, then the Ego and all that belongs to it *must be resumptively called into existence in a non-mediate way at every repetition of consciousness*, and be sustained during it, by a potentiality existing either in the physical world, call it Matter or whatever you will, or else beside it, which acts to that effect in chronological agreement with the occurrence of the specific physical sequences along with which consciousness happens.

At this stage we cannot advance the statement beyond the above alternative mode. Whether or not

the mental experience in itself offers evidence of Mind as an entity which during the egoistic actualisation gives, in spite of the rule we have noted as generally prevailing to the contrary, some special phenomena variable and in excess of the executive-conditioning, and if we have to infer it as existing in itself, also, in the intervals when our consciousness is not obtaining, will be considered hereafter. Further, in either of the above cases, the question of the sanction enforcing the limitations respectively, yet remains. That point, too, must be postponed. All that is so far made clear is, that there is such a sanction to be inquired into.

It is necessary to go step-by-step, and it will be a convenient course next to consider the Laws of Pleasure and Pain.

CHAPTER III.

PLEASURE AND PAIN: THEIR WORKING RULES.

§ I. *Two great Antithetic Feelings.*

PLEASURE and Pain are two great antithetic facts of feeling, egoistically arising, which, in a scale of degrees, are joined to the primary phenomena of our organic activity. Some sensations, perceptions, imaginations are agreeable, others disagreeable; the apprehensions and recollections of them, as well as their actual experience, giving a system of Emotions, rising from grade to grade. In changed conditions things which afforded pleasure may cause pain, and previously painful things may become pleasant. It is possible, too, for experiences to become indifferent. What we now want to learn is, the rule which determines whether the experience shall be agreeable or the contrary, or indifferent,—ceasing, that is, to be emotional at all.

Let us take first the simplest cases—those of the bodily senses. Why, for instance, does a particular perfume, or, say, the colour of blueness, or the taste of sweetness, or the sound of one of the set musical

notes, or the touch of smoothness, please? Since the doctrine of the Association of Ideas became popular, thinkers in our own country have avoided this fundamental question. They have expended themselves upon Association and its astonishing analyses. In order to get upon the track of a more ultimate answer we must go back for a moment, and give two or three further details of the process of consciousness.

*§ 2. Bearing of the Primary Laws of
Consciousness.*

We found in Chapter I. that for an impression or organic activity to be effective in the case of a human being, it must fill a certain space and last for a certain time, both measurements being known for some of the senses. So far are individual fibres and single vibrations from being large enough, that we should never have known of the existence of fibres and vibrations but for the exaggeration of the microscope and the aid of mathematical reasoning.

What we may term the unit of consciousness—meaning by it the *minimum* of awareness resulting from the smallest area of conjoint sense-activity which actualises the Ego and gives the phenomena of consciousness at all—is, therefore, not the same as the unit of impression, but is a large massing of

these, which affords, by cumulation, the required collective rapidities, volumes, etc.

This fact is of great importance. For it follows from it that, although consciousness is only maintained during the strict supply of the activities of impression up to at least the prescribed *minimum* of them, the arbitrariness of the law otherwise is such, that it is a matter of no importance how the units of impressional-activity behave among themselves below its range. We have nothing to do with them individually, and it does not signify how they vary or fail singly, so long as in some way of substitution and compensation the collective-total of activity is furnished.

Putting it in another way,—the areas of nervous activity to which our sensations are causally related are in each moment of consciousness—without any awareness of it on our part—being infinitesimally renewed and compounded; ever decaying and being substituted during all their existence. Psychologically regarded, the primary units of nerve-activity are not individually indispensable.

Moreover, under the law of the actualisation of the Ego,—which requires conjunction of two senses,—in all cases where the muscular, that is the secondarily-acting, sense has it not in its power to coincide effectively with the other sense acting, no experience arises: so that deficiencies in the impression of each

sense which are below the dimensions of the range of the muscular apparatus, may and do occur without challenging our notice. The microscope will show us breaks of continuity, etc., where we did not surmise them.

• Further, we do not know whether these collective areas of nervous activity are made up by aggregation of fibrils of the same scale, in size, etc., or if they are a specifically-grouped *total* of different classes of ratios of fibres. A good many experiences which once seemed to be simple ones have been found to be analysable in ways which hint at compounds of activity made up of proportionate ratios. In any case, we are forced to believe, that, for each distinct sensation in each organ,—that is, for every colour, sound, etc.,—there is, in one or other of those two modes, a specific grouping of active fibrils.

It will be found directly that this surprisingly minute business of the activities of impression below the range of consciousness has much to do with the questions of Pleasure and Pain. The two further details of the process of consciousness at which we have now arrived admit of being stated thus:—

1st. The rapidity, volume, etc., of the activity of the nervous substance which conditions sensory consciousness is a collective-operation, made up of infinitesimal units of impression, which, within certain limits, are substitutable physically, and which, as matter of fact,

are so substituted, from moment to moment, during the sensation's continuance without the consciousness being affected by the substitution.

2nd. Every specific kind of experience in each sense,—that is, every distinct colour, sound, taste, smell, etc.,—implies, in accordance with its required causally-related rapidity, volume, etc., a certain specific grouping of these activities, which, in order to cover the chances of its being formed by either a collection of like fibrils or by a proportionate adjustment of different ones, we will call a *nervous ratio*.

It is now possible to make plainer what is the process of a successful specific sensation; in other words, the process of the first order of experiences which give us pleasure.

§ 3. *The Law of Pleasure.*

A definition of this Law may be ventured as follows:—

Whenever the nervous activity is so started by extra-bodily sources of impression, or by equivalent reminiscent recurrence, as that the fibres needed for a grouping answering to a specific sensation are made to operate with the required rapidity, volume, etc., without interfering ratios being aroused in that part of the field of the organ so as to mix effectively—that is, more-or-less destructively—with them.

such of the latter as it may be supposed are fragmentarily stirred (owing to occurrence of interjuxtaposition in the organ), not being massed sufficiently for association with the muscular sense, secondarily acting, and so not appearing in consciousness at all,—then the specific sensation is fully experienced, and this qualitative economy of consciousness gives along with the non-egoistic sensory phenomena the egoistic feeling of Pleasure.

By using the phrase “qualitative economy,” we seek to note the fact, that the first simple style of quantification, sufficient for mere consciousness, that is, for the primary actualisation of the Ego, is departed from,—is, so to speak, improved upon; for Pleasure, the organic activity must be quantified in and by a certain order of nervous fibres or ratios more closely agreeing among themselves than those which can barely actualise the Ego.

It should also be mentioned that it is by the division of impression infinitesimally, and the unit of consciousness being larger than that of impression, that the field of each sense-organ is made available to the fullest extent for sensations in turn.

§ 4. *Summary Presentation of Evidence.*

But proofs must be given of the above law, viz., that the secret of Pleasure, in its lowest class of instances, lies simply in the *selective* occurrence of

impression, so as that certain ratios of nervous activity, those causally-related to specific sensations, shall be the *only ones* which really attain consciousness on that occasion,—the others, in so far as they are aroused at all, not rising into consciousness; it not signifying, so long as they do not reach that limit, how many they are totally, or which they are individually. The evidence is furnished by a large class of facts agreeing in showing that, whenever you get one ratio of nerves (using the phrase above fixed on) to act alone, the feeling of pleasure arises, and that any hap-hazard mixing of ratios at once destroys the agreeableness of the experience.

Take glass and stain it,—that is, make it capable of transmitting or reflecting only one kind of rays; instantly the beauty of a self-colour appears. Or strike a wire so stretched as to give only a proportionate vibration, or agitate the air in a measured reed, and the sweetness of a musical note is heard. Any sense will give opportunity for the experiment. Round and polish into smoothness an object that can be touched; so soon as the surface is perfectly uniform, so that it gives but one and the same impression, the finger delights in it. Sweets are substances which have this capability of identical impression. So again of perfumes. In the muscular sense, the working of the law is clearly seen. Elegance, grace, means undistracted, perfect continuity of

motion,—activity aggregating the largest number of agreeing units by a specific direction being taken. But to follow out that illustration would lead us into the domain of Art, for which this is too early a place.

- All that happens in each of these instances is this,—that you practically eliminate all the nervous ratios but one, and give to that one aggregation.

Take, for example, the sensation of blueness. It implies the simultaneous impression, so as to be continuous in consciousness, of an area of the optic nerve fibrils capable of conditioning the experience of blueness, without interior limitation, division, or distraction in that part of the field of the organ by the sensible activity of other specific ratios. This, obviously, is an economical fulfilment of consciousness of the qualitative kind by simple aggregation of identity. If another ratio of fibrils had been used, or if the fibrils had been differently impressed (which, for this inquiry, is the same thing), the sensation might have been that of redness or yellowness, giving like pleasure—only in either case other non-agreeing ratios must not have been effectively aroused in that part of the organ. So on through the minor chromatic scale. In each example the accumulation of identical experience in this qualitative way will be found to give the feeling of simple beauty. On the contrary, modify the media, so

that the causal proportions of hues, or sounds, or flavours, or perfumes *mix* nullificatorily, losing their specific aggregations, and, as they do this, the beauty fades—it obscures, it eclipses.

Here, then, we come upon a working-rule for this first class of cases, enabling us to predict, scientifically, when Pleasure in sensation will arise. Restating the law, it will stand thus:—

The impression of an area of nerve fibrils of a certain ratio,—fibrils of other ratios within the limits of the area not being stirred effectively,—gives birth, along with the specific sensation, to a gratification emotionally, the generic name of which is Pleasure;—this being attainable whenever the Ego is in actualisation by in any way sorting the rays of light, proportioning the vibrations of sound, making the increments of tactful or muscular experience congruent, or, in any mode, supplying a sense with impressions of only one ratio in mass enough to make up effective congruent consciousness. Putting it in a single sentence,—beauty, in the first, lowest order of instances, is, in its objective meaning, high unmixed reduplication of the same impression or exertion.

How many kinds of aggregations of ratios are possible in each sense is a question of cosmical causation. It depends upon the number of distinct

groupings provided for in the nervous fibrils under the challenging of objects impressing them, either as the things exist in Nature or as they may be supplementarily added by the inventions of Art. The probability is that, at present, we are far from the limit—that Civilization has a store of modifications of sensation yet unopened.

The higher part of the task yet remains,—the dealing with the question of what may be called compound beauty, *i.e.*, the cases in which an organ uses more than one aggregated ratio at the same time, and where more than one organ contributes to consciousness simultaneously; cases in which Memory and Intellect take part, adding perception to sensation, and where Association has its wonderful play. But this will be better postponed till Pain has been treated of.

In the meantime, every opening of the eye, every resonance in the ear, every impact on the skin, furnishes experimental illustrations of this first Law. Whenever a man's eye is attracted, be it by a flower, by the splendour of a cathedral window, the gorgeousness of a sunset, or even by the faint flushing of a human cheek, he may find aggregation of optical impression in one or other of its bright glows. Music weaves its spell with the same aid. Form gets its magic from it. The lower enchantments of taste and smell arise in this way. The law is omnipresent—it is absolute.

Further incidental explication will be given in considering the subject of Pain, to which we now go.

§ 5. *The Law of Pain.*

It is impossible to understand the process of Pain, any more than that of Pleasure, without keeping a firm hold of the fact of the difference between the unit of impressional-activity and the unit of consciousness. Anæsthetics can blot out Pain; there are other modes of mitigating it, some being merely mechanical. Earlier we saw that to constitute a sensation there must be a grouping of impression, specific alike in space and in time; all activity below that limit, whatever effect it may have vitally, having none of a sentient character. Owing to this fundamental law of consciousness (which, for convenience, we will in future call the LAW OF EFFECTIVENESS), Pain loses certainty,—there are blessed possibilities of escape. Any injury ceases to be painful (1°), if it be done by totals in areas below a certain size, or (2°) if it be done within a *minimum* period of time,—which is, probably, really the same thing.

The rule to be put forward, not as explaining the feeling of Pain, for that, like Pleasure, is an ultimate fact of our experience, but as giving the constant antecedent of its occurrence, so enabling its prediction, is this:—

Apart from the above modes of nullification, Pain arises whenever an established nervous co-ordination—in other words, a natural or habitual grouping of fibrils—is in act disintegrated, being reduced within its customary area to a lower numerical activity; it being possible for this to be effected by the destruction, the temporary incapacitation, or the non-impression of some of the fibres. Pain, as a first rough definition, may be said to be a protest which consciousness makes against its own dwindling. The same Law, more subtly interpreted at each remove, holds as strictly in the higher ranges of experience as in the lower.

§ 6. Review of the Proofs.

Turning, again, to the proofs, it is plain, in reference to common sensation, that bruise, laceration, destruction of tissue by burn or corrosion in any way, pressure (either produced mechanically from without or by shrinking or inflation within), defective nutrition, and even momentary partial failure of blood-supply, are all real causes which can account for non-activity of a portion of the nerve fibres that had previously acted together, and do all actually differ from the ordinary activities. It is certain, from the necessity of the cases, that in every one of these instances our normal experience is not repeated;

the operations, at some part of their area, interfere fragmentarily with the habitual nerve-groupings.

What happens, physiologically, if you prick the skin? The point of the instrument, while it, either by superficial pressure or complete puncturation, disables some of the nerves of the minute area it affects, causes others to act without the associated activity of those which accompany them in the ordinary habitual experience. The minuteness of the nervous groupings must not be overlooked. The point of a pin applied in the more sensitive parts of the frame may cover the fragments of several groupings, being, in fact, incapable of any contact exactly fitting the requirements of form for reproducing the habitual experience of the part. In different portions of the body, a like puncture causes very different pains; the habitual groupings are not the same in various parts. It may even cause no pain worth speaking of where the comparative sparseness of the fibres makes the area of the groupings large, abating their number. Cuts, bruises, burns, it can easily be inferred, operate in the same way.

In all the specially-named neuralgic pains, from toothache to sciatica, there is inflammation or injury accounting for the displacement of customarily contiguous substance. It can be made out clearly in a sufficient number of cases to establish the Law, that the effect of these displacements is the neces-

sary disintegration of the habitual nervous-activities, reducing them to lower numerical groupings. The horrors of nausea become intelligible when we consider what a series of habitual groupings—all those of the peristaltic movements—are operated upon in just the reverse way,—unravelling them as you might do the threads of a cord. Flatulency, which is capable of causing one of the worst sets of pains, can work disintegration by internal distention just as effectually as can the presence of a splinter of bone, or an artificial ligament. The milder pains of swooning are an obvious case of the law of numerical decrease of nervous co-ordinations: when the blood-supply fails, arrest of some portions of the nervous-activity instantly follows, making the rest fragmentary. The ill-sensations of disease—rising from the merely disagreeable feelings of slight indisposition to the sufferings connected with the specific ailments—will not remain mysterious when we remember the failure then occurring of multiplied habitual coincidences in numerous physiological processes and relations of activity in different organs. In the agonies caused by some poisons is found the worst, that is, the most complete, illustration of the rule; the drugs, etc., violently attack some tissues, processes, etc., and so destroy the needed consentaneity of activity in large portions of the frame.

As offering a striking example of the law, there may be given the experience of fatigue, of tiring. It is an experiment within everybody's power. Put out the arm, leaving it to sustain its own weight. It will not be long before the not unsatisfactory sensation got from integrating the vigorous muscular co-ordinations decreases; the feeling will shortly turn into one of discomfort: if the posture be preserved it will become painful. Rapidly the experience will be that of torment, and it is possible to make the pain accumulate to agony.

What has happened to cause this alteration of experience? A progressive disintegration of the nervous co-ordinations, as one bundle of fibres after another became disabled in use. It is the same cause operating which makes all excess of Pleasure of any kind so soon to run into Pain. Part of the ratios concerned become exhausted; so soon as they can fulfil no reminiscent area, pain is felt.

By way of enforcing the great subtlety of the nervous integrations and disintegrations, the sensory experience got in the case of heat and cold may be instanced. This sense is distributed, more-or-less effectively, over the whole surface of the body, and there is scarcely any limit to its momentary co-ordinations. No standard is fixed in consciousness for more than a second. You may make that seem cold to one hand which seems hot to the other

hand. But, in every instance, the working of the law of integration and disintegration is traceable. The chill of cold is owing to the lessening of the area of a prior co-ordination caused by a prior degree of heat. If the heat tended to be extreme, then, in the first stage of the cooling,—as the narrowing areas fulfil the average reminiscences,—the feeling will be that of pleasure, fading and changing as the areas further contract. You may get the same smart by means of an extreme of heat or of cold disintegrating the tissue. Anyone who obtains a clear notion of the working of heat and cold in our bodily experience will hardly be surprised at the complex operation of these laws in other fields.

Even the continuous minute pains accompanying, in the first stage, some processes of repair and cure offer, when fully analysed, phenomena of the same subtle kind. They must be owing to the reparative processes impressing—by the extra vital activity going on—associable nerves at the spot in a way which stirs reminiscence defectively, fragmentary co-ordinations failing from minute to minute, from second to second: the pain continuing—but with growing fitfulness—until joint activity is restored sufficiently to fulfil reminiscence; or else, until the co-ordination by its own mechanical, chemical, physiological activity sinks below the effective law

of^{*} consciousness. In either case, pain will cease magically.

This brings us to what may be termed the Sub-Laws of Pain, the rules giving its intensity and continuance. But before attempting to specify these, another point should be dealt with.

§ 7. *The Problems involved.*

A typical set of questions may be raised in this way:—Where is the pleasurable consciousness in the skin of which the smart of a prick, a cut, or a burn is the disintegration?—to what delight of the muscle is the agony of cramp related?—what ecstacies of the sciatic nerve answer to the sufferings it at times gives?—when and where are the paradisiacal delights antecedent of the gout?—not to speak of the torment of hurts under the protecting nails, or the eyelids, the vulgar agonies of corns, the inexhaustible pangs of toothache. It is, indeed, a terrible catalogue. The explanation lies in the very important fact that Pain includes and sums up *all* the reminiscences historically belonging to the nervous co-ordinations interfered with by the injury; so that a single pang may inversely represent all the joys that ever were experienced in and through that part of the organism. It is plain that, if the injury is leisurely enough to comply with the Law of Effectiveness, it must cross all the cues of the different

sensations which have been had from all the inter-combinations within that nervous area.

This gives the reason of the striking disparity between our pleasures and our pains. The pleasure may be the fulfilment of one nervous co-ordination,—it is, at most, only the production of some of them; but in the pain, there is a totalisation of all the possibilities of feeling, so far as the effect of the injury reaches.

Moreover, the fact must be grasped, that it is the *historical* reminiscence which is drawn upon, not the ordinary experience only. To understand the seemingly enormous disproportion between Pleasure and Pain this has to be held distinctly in view. Owing to the difference between the unit of impression and that of consciousness, there is always at work in our experience a law by which nervous areas decrease in size, progressively passing below our range of feeling. It is this which makes HABIT mechanically effective. It enables us to walk, to play music, to perform a thousand acts, without calculating the motions. But it, at the same time, suspends much sensation. We do not feel the contact of our clothes, nor hear the rush of blood in our veins. In one word, there is a cumulating-suspension, which practically amounts in adult life to a loss of the cues of much of our sensation in babyhood, in infancy, and during juvenility. It is, consequently, impossible for

us to know what joys of this low order we have had. Can anyone record and estimate the ecstatic thrills bubbling out in the crowings, the triumphant tossings of the baby in the nurse's arms? There are no promptings for them but the rapid first breathing of the air, a feeling of the blood running in the new veins, the beholding of the light, a soft contact of clothing, the working the muscles of the limbs, and the gnawing the coral with the gums. Can there be any doubt that these are then pleasures? But, if so, they are possibilities of pain, for injury masses them, undoing the work of the Law of the Decrease of Nervous Areas. How many inexplicable joys of the muscular frame even advanced youth has, which, as time goes on, we lose sight of! These earlier experiences reappear anonymously in the consciousness of the old man, long after he has ceased to be able to identify the joys which are reversed. In darker days they come again as pains.

As exemplifying these forgotten, unsuspected possibilities of sensation, take the curious experience of titillation. The nervous co-ordinations of the skin and the surface-flesh may have long since narrowed and fallen below ordinary consciousness, but you only have to group them by the soft large touch of a feather, or any brushing contact, and instantly you writhe in an excess of ludicrous felicity. It is to

this ecstasy that the smart of a cut or a burn must be compared, not to the unmassed ordinary experience. New skin formed in the repair of injuries has astonishing sensitiveness. Indeed, no one can note the spontaneous thrillings, the almost unendurable titillations of new-healed hurts without observing what strange pleasures the nervous co-ordinations of the flesh store up when new. Morbid activity in old skin will act reminiscently. The flesh, ever-and-again, pleasantly tingles for a second most unexpectedly. In some skin diseases even the riotings of certain parasites are enough to reassociate the diminished areas, and to give preposterous thrillings of fleshly gratification.

There is a mass of facts warranting the conclusion that by far the greater part of the reminiscences of our bodily pleasures in these ways diminish and grow obscure; in adult life we are unaware of their multiplicity, intensity, and range, until in the quiverings of pain they stir again, but this time distorted and imperfect. In the case of the interior pains,—cramps, nausea, aches,—which are at times so violent in their intensity, it is most difficult to go far enough back in tracing the working of the law. It must be remembered that, judged by the order of the embryonic development, those parts have a longer history than the surface tissues we have been mainly dealing with. What antique joys that dim

history includes, who can know? But this may be added, that, under the action of alcoholic stimulants and of some drugs, it is possible to mass the obscure organic sensations into positive enjoyments of no small bulk, though this is done at terrible risk and cost. Where would be the fascination of these practices if the same laws of Pleasure and Pain did not hold good in those dark inner regions?

§ 8. *The Sub-Laws of Pain.*

Here let us return to what we spoke of as the Sub-Laws of Pain. They may be submitted thus :—

1. In any part where the nerves are numerous, and where great frequency of use, constantly varying itself, reduces the area of separate co-ordinations, the injury, to give pain, must be by minute application, finely demarcated. Thus a large surface-injury by pressure, or by any means acting in mass, with an outline not clearly defined, may give less intensity of pain than a small cut or prick. A burn gets its great efficacy of pain under this law: quick heat acts so finely that no areas are destroyed in mass, they are all disintegrated, though not sufficiently minutely to evade the law.

2. In parts where the function is simple and the co-ordination has few or no options of use,—that is, little variability of habitual activity,—any injury large

enough to interfere with a nervous co-ordination gives great pain, and the pain is more likely to become chronic than in cases coming under the first rule. The excessiveness of the pains from hurts under the nails, beneath the eyelids, or in any constantly protected part, is owing to the protection lessening the variety of habitual impression; such limited use necessarily leaving the areas of co-ordination large, making any interference operate throughout the whole extent. In this way, pains of the joints, and those arising in most cases of interior hurts, are large, violent, and enduring.

3. By persistence, new, or even what may be termed artificial, nervous-groupings may be formed,—use, by means of the plasticity of the vital processes, constituting fresh co-ordinations out of coalescing fragments of old ones, making what was at first painful come to be agreeable. This is shown in acquired tastes, etc., and in many modes of exertion made facile by exercise.

4. An injury which destroys a total co-ordination, or group of co-ordinations, interfering with none which it does not destroy, only gives pain, if at all, during the moment that the destruction occupies;—obviously it will be different where the destroyed part belonged integrally to a larger grouping, the activity of which is periodical or occasional, and which, upon recurring, will be defective, owing to the absence of that part.

In that case, pain will then arise, as happens with reference to amputated limbs, etc., long after the removal of the part.

5. The mere lapse of time, apart from its relation to the periodic processes of the body, has no power over the cessation of pain. An injured co-ordination, in order to cease being painful, must either, by virtue of the injury telling upon the vital processes of the part, destroy itself throughout its whole extent, or, by means of the vital activity, it must repair itself, or else, under the plasticity of use, it must subdivide itself below the range of the Law of Effectiveness, or take up new associations. Excepting for these provisions, it might go on giving pain illimitably, if the vital energy held out. In the great majority of cases, pain is more-or-less temporary, owing to the vital process setting up its qualifications at once, interfering with the blood-supply, etc.; in some instances, the first stages of repair are more painful than the injury, since the process must, at the outset, be itself fragmentarily destructive in order to effectuate itself; but, in many cases, a very short time enables the process to reduce the fragmentary areas below consciousness.

6. By the inurement of exercise, the risk of pain may be progressively done away; but, in the same degree, the chance of pleasure in the part must be foregone. “Exercise” is a popular word for great repetition of the impression or the exertion, such re-

petition meaning multiplication of minute variation in the use of the part; which, again, implies decrease of area in the co-ordinations, lowering them below our range of feeling; but, in connection with them, happily, other series of related co-ordinations may be improved, or organised, remaining in feeling.

7. In all the special senses, and in the frame generally in the case of common sensation, there is a margin of variability, alike in the occurrence of Pleasure and Pain, depending on the state of the vital or physical energy. What is disagreeable, inconvenient, painful at one time, is not so, or not so to the same degree, at another time. This variability is fixed, no doubt, by the blood-supply, etc. So, again, the agreeableness or disagreeableness of an impression is affected by the immediately prior experience: sudden intensification is not liked, for the violent readjustments of the apparatus asked by it involve some disintegrations.

8. Finally, in all cases of pain there comes in (besides the more roundabout, though in the end more effective, medical methods) the curious power of preventing, mitigating, destroying the feeling by the manipulation of the *attention*. The explanation of this will require knowledge of the higher modes of our experience. It is returned to, in its proper place,—that is, in Chapter VI.,—where the subject of ‘Attention’ is considered.

§ 9. "Irrationality" of Pain in some Cases.*

It remains, however, to be pointed out that Pain, in not a few cases of it, shows striking over-quantification, and also irrelevancy of occurrence in point of time, and great obscurity of localisation. Its absence in some other instances of injury and wrong activity is equally irrational. The old belief as to the uses subserved by bodily pain being part of the facts of consciousness, has received some rough shocks by the discoveries of the more detailed physiological researches of modern times. It used to be thought a solution of the happening of pain to say that it had the effect of apprising us of injury. It was assumed that this kind of suffering betokened what one may term a physical conscience in the body, protesting against wrong-doing in reference to physiological laws. It was a striking generalisation, but we now know that it is too easy an explanation.

The frame may, in fact, be ill-used in many ways, and the physical conscience is all too late in commencing its reproaches. In some cases, the nervous symptoms even mislead: pleasure is felt where pain should arise; in other instances,—as, for example,

* This point was dealt with by the present writer in an article on "Anaesthetics," in *The Westminster Review*, many years ago. Nearly all the remarks in this section are taken from that article.

in the effects of certain poisons,—it cannot be said that there are any premonitions at all; time is not given for them. Sometimes the pain is wholly unintelligible,—a mere unlocated uneasiness; and it scarcely ever operates in the exact ratio of the importance of the injury. A corn on the foot gives more anguish than the beginnings of many fatal diseases. But though it is requisite now to make these qualifications, they must not be pushed too far just to gain strikingness of statement. The cases in which we are exposed to the risk of suddenly impairing or destroying the organism without warning given are practically rare exceptions; moreover, speaking generally, the sensitiveness is great where damage would be serious, while, as we have just seen, provisions disclose themselves, in some classes of exigencies, for lessening the susceptibility when necessity requires that pain shall be customarily braved. Anæsthetics will be spoken of separately below, in so far as respects their mode; but they really do not touch these primitive phenomena at all; the wound continues to smart, the tooth to ache, the organ to throb *until* the sedative is applied. The question of the primary use of pain is in no way affected by those recent fortunate discoveries.

Something, however, still needs saying on another aspect of the matter. The old belief was, that bodily pain, as well as having a preventive character, had

also a punitive operation. It was hardly possible to escape the idea, since the suffering generally continued *after* attention had been fully aroused and directed, and the progress of the injury stopped. An impression was in this way created, that the suffering of pains which resulted from bodily excess or neglect was, in fact, a mode of expiation ; that it was a balancing of the account, preventing illicit pleasure from being any gain. Here, again, puzzling difficulties arise, so soon as the theory is applied to the facts in detail. No principle of justice can be detected underlying these supposed expiations ; there does not appear to be any attempt at an exact measurement of the suffering which wrong conduct is to entail. A mode or degree of excess or neglect that, so far as human observation goes, is more venial than many others, may be far the worse punished ; then, in the case of different individuals, the penalty for similar folly, though it is the same in kind, varies immensely in acuteness and pressure ; nor does it necessarily bear any ratio to the personal gratification which was enjoyed by the particular sufferer in the commission of the offence. The principle of proportion in reference to the seriousness of the injury caused or risked signally fails—it almost does so ludicrously. Take, for instance, the anguish of corns and toothache ; is it not preposterous to ask whether the pains are not alto-

gether in excess of the wrong conduct which is generally identifiable as the cause of them? One is tempted to affirm that the fine exquisiteness and long persistence of those two torments, hypothetically regarded, make them not inadequate reprisals for bad emperors who had abused the purple in exhausting all the pleasures of this world. Moreover, any judicial apportionment of penalties for unlawful joys is now made for ever impossible, since the discovery of anæsthetics has enabled the chemists to retail the waters of oblivion over their counters.

A yet further remark offers itself. It was a part of the old beliefs that pain had one more use,—that of enforcing carefulness in the future; its remembrance deterring from a repetition of the conduct causing it. So far as anæsthetics make the continuance of suffering controllable, and facilitate the cure of injuries, their discovery has a bearing upon the use of pain in this respect. But, again, a qualifying remark has to be made. There has always been a mystery about the way in which the old, unmanageable prolongations of agony have failed to prove effective in fully terrifying mankind. It is simply wonderful to see the gay daring with which human beings will face the punishments consequent on disorderly living, returning again-and-again to snatch the fleeting joys, after experiencing previously

close-treading pains which ought to have left them sad and trembling to their lives' end. A given amount of pleasure always tempts far more than the same amount of suffering deters. That is the standing paradox of morals; we might add that it is the one circumstance which makes morals possible. But this is not the place for trying to approach those higher solutions,—any detailed attempt of the kind must come much later. Here, confining ourselves to the bare fact of the partial failure of pain as a deterrent, it may just be said that one of the Laws which will be found stated in the chapter on “The Neurotic Diagram” throws some light upon the problem, by making it seem probable that, in the nature of things, there can be no adequate recollection of violent pain. If that be correct, the lessening of human suffering to calculable ratios of moderate bodily discomfort, instead of the old incomprehensible agonies, will increase, rather than impair, the deterrent uses of pain.

Whether or not bodily pain creates in men any special virtues, and in its unmitigated occurrences afforded occasions for specific emotions, which, now that anæsthetics are available, may suffer declension, are points which, for the reasons hinted at above, are better postponed to another place. But, before proceeding further, we may add one observation, as follows:—

This irrationality of over-quantification, irrelevancy of happening, and obscurity of localisation, shown in pains (and, be it remembered, the same observation holds good in respect of some of our pleasures) inevitably suggests that, unless a general survey of the world points to the conclusion that there is blind failure, or, still worse, an element of malignancy in things, there has been a catastrophe at some prior stage of the racial history of man, jarring, by a violent shock, the happenings of the human experience, which at one time extended further in some directions than it does now.

Let us return to the humbler first steps of our inquiry.

§ 10. *The Process of Anæsthetics.*

After the incidental allusions made above to anæsthetics, only the mode in which they act has here to be considered. Astonishing and blessed as that action is, it need not detain us long. The happy wonder is but a negative case of the Law of Effectiveness: the drugs, or other means used, operate by preventing the usual grouping of the units of impression into units of sensation, keeping them below consciousness. This they may do by affecting the blood-supply (that supply being one of the physiological conditions of sensation), by dissociating the muscular activity, or by direct influence on the nervous

substance. That this is the explanation is shown by the fact that the same painlessness under injury may be secured by merely physical and mechanical means. Cold will do it; so will the surgeon's revolving-knife, which, in the rapidity of its revolutions, inflicts its injuries by increments so small and yet so total, that there is not opportunity for the time-aggregations of the units of impression needed to give sensation. Some drugs, etc., while in this way preventing effective sensory impression, will stimulate cerebral activity, favouring reminiscent and imaginative consciousness. The process in part belongs to the question of Attention. But, putting the case generally, it is clear that anæsthetics operate their effects by either entirely nullifying the actualisation of the Ego, or by limiting its range locally, in pursuance of the Law of Effectiveness.

§ 11. Case of the Special Senses.

If we turn now to the case of the special senses and the pains they furnish, it will soon be seen that the same law regulates them. The eye in its sensations of colour does not offer much possibility of pain; but, so far as what we call ill-taste in hues goes, it is plain that the objectionableness of the juxtaposition of certain tints arises from a mutual interference of them which abates the numerical activity of the co-ordinations engaged. This will even admit of mathematical

calculation. Dazzle and glare can, in extreme cases, give much discomfort; and it is easy to see that they cause disintegration of habitual ratios. Exactly the same holds of the ear, in which disgust is worse than in the case of the eye, owing to our having less control over the machinery of the organ. Every discord can be shown to imply interference amounting to numerical abatement of nervous activity. In the instances of taste and smell, the law would imply that the substances giving ill flavours and ill odours impress the nerves of the respective organs in ways which do not agree with, but which reverse and disintegrate, the groupings of the pleasant experiences. Enough is not yet known of the chemistry of flavours and odours to admit of very clear illustration, but we are able even now to form some idea of what might almost be termed the mechanical process of expansion and contraction of the areas of impression in some of the cases. Everybody knows how olives, or any other astringent substance, can enable the recovery of some of the softer flavours. Some tastes and some smells are agreeable, or the contrary according to the rotation in which they follow others. Both cooks and perfumers understand that there are classes of flavours and perfumes, some of which mix well, others ill. Chemistry may yet show us exactly how the crystal of sugar and the crystal of quinine oppose one another in the sensation they give; though it is not likely

ever to be able to explain how the fragrance of the rose and the stench of a sulphuretted gas are antagonistic by a specific difference in the configuration of impact. The sense of touch exemplifies the law perfectly. Unpleasant contact is always abrupt, rough, discontinuous; in other words, it disintegrates the reminiscent-groupings of the nervous fibrils, got from the more successful, or even from the average experience.

It should be added, that, although Pain and Pleasure give always, in the different and manifold cases of each feeling, the same dissatisfaction or satisfaction, perfectly identical when regarded purely egoistically, yet each individual instance of Pleasure and Pain is distinguishable, and is made capable of classification, by virtue of a specific difference of associated sensory experience. Pain is not, in its sensory phase, merely privation, or lessening, of the previously experienced sensation in connection with which the historically-related pleasure was had. Each pain has its own positive sensory character, just as each pleasure has. Not only do we in the case of pain speak of smarts, aches, pangs, spasms, but we can specialise, and even reminiscently recall, ill odours, ill tastes, etc., using for them particular names. It is not difficult to see the necessity of this. If actualisation of the Ego takes place at all, there must be sensory phenomena, and

since in pains the sense-experience has in the very nature of the case to be other than that had in pleasures, a distinctive character in them regarded simply as sensory phenomena is inevitable.

§ 12. Evidences of the Law in the Higher Phenomena.

In all this we have confined ourselves to the pains of sensation merely, systemic and special. If we pass to the higher ranges of the moral, the æsthetic, the spiritual life, the applicability of the Law is even more strikingly apparent. We know no pains in those realms excepting in so far as we have first known pleasure. Pain there is always seen to be privation. The use of such technical terms as ratios, co-ordinations, nerve fibres, seems absurdly clumsy. With what line or compasses shall we measure the area of a hope, or take the altitude of an act of faith? Where is the arithmetic by which we can reckon the activities which flash, resound, and stir in our enjoyment of Art? By what mathematics shall we calculate our penitences, our aspirations? There is needed a new set of terms which language as yet has failed to give us. However, further on, we shall try to show that the activity of the organism, at certain stages, takes on a metaphorical style for these higher modes of consciousness; the experience being none the less real for being different, as is evidenced by its effective value as part of the facts of the phenomena of Attention.

§ 13. Restatement of the Views.

At this point, postponing the higher applications, we may summarise these views respecting Pleasure and Pain as follows:—

There is a general law that, when the activity of the nervous apparatus, in addition to massing itself quantitatively sufficiently to condition consciousness, becomes qualitative,—that is, when the activity observes a specific classification of inter-grouping which fulfils and cumulates reminiscence,—Pleasure arises; while experience further shows that, when nervous fibrils have in this way been co-ordinated into a chronologically-related activity, then, if part only of the area is afterwards operated upon,—the absence of the previously co-ordinated fibrils not being substituted by some other combination, the disintegration not being taken small enough or quickly enough (which may be the same thing), nor under the influence of anæsthetics, so as to evade the Law of Effectiveness,—then Pain occurs. But, on the other hand, the facts prove that it is possible for new chronological coincidences of nervous activity to emerge, which, out of pains, may give pleasures,—even higher ones; the Attention being capable of very complex manipulation.

§ 14. *The Causation at Work.*

A word must be repeated as to the character of the causation at work in Pleasure and Pain. The specific fact to which Pleasure is causally related is this,—that the rapidities, volumes, etc., of the nervous activity which originates consciousness in the way of giving the occasion and the quantification of it, shall, also, in the making up of their required totalities, develop qualification, by observing a certain order of inclusion and exclusion of some of the possible component units of consciousness. (In the higher orders of pleasures, as hinted above, a further fact comes into play, that of the cumulation of reminiscence; but its consideration is better deferred until the subjects of "Beauty" and "Art" are in hand.)

It will, however, very reasonably be said, that the above formula, after all, does not much explain the causation of Pleasure and Pain. What we need to know is this,—how that which we have termed *qualification* of nervous co-ordination (as distinguished from mere quantification), comes to determine agreeableness or disagreeableness in any instance of consciousness.

Let us recall some words purposely used in the opening sentence of this chapter; those affirming Pleasure and Pain to be facts which egoistically arise, —that is, they supervene upon the experiences which

are non-egoistically referred. It has, indeed, been contended that Pleasure and Pain are not phenomena added to the sensations, etc.; but that they are simply a necessary part of the sensations, etc. Surely, such a debate could only arise from a confusion of phraseology. It is impossible, we take it, to speak in detail of our consciousness without in some way dividing it into egoistic awareness and experience which is non-egoistically referred. All that is affirmed in taking up the position we here do is, that Pleasure and Pain are facts belonging to what are distinguisingly classed as the more egoistic phenomena. So put, we believe no one will question it. For who can overlook the circumstance that it is possible for like sensations, etc., to cause either Pleasure or Pain indifferently, according to the order in which the sensations, etc., occur with respect to the egoistic experience?

But by recognising that Pleasure and Pain, in the way above distinguished, arise egoistically, we are able to trace their causation another stage; for to say that they are, in this way of distinction, egoistic phenomena, is, according to the statements of the preceding chapter, to assign them chronologically to the activity of the central molecules of the brain, just as the sensations, etc., are quantitatively referred to the peripherally-impressible fibres giving the so-called non-egoistic phenomena. The case, therefore, may now be pushed forward a further step thus,—

Pleasure occurs whenever there is happy prompting, challenging, constituting of the central-molecule activity chronologically conditioning the Ego ; *this always occurring when* the peripherally-impressible fibres operate in the ways of special selection and seclusion of ratios above sought to be described by the terms "aggregation of identical impression," "cumulation of reminiscence," etc. : such special grouping of acting fibres implying superior dynamical effectiveness in prompting, challenging, constituting the central-molecule activity. In other words, Pleasure means a large, or at least an easily-effective activity of the egoistic molecule, which is given by certain ratios of the fibres running to the molecule being better adjusted for effecting that prompting, owing to a vital habituation realising itself naturally to that end in the scheme of the organisation of ourselves and the world. On the other hand, Pain occurs when that Ego-conditioning process, having once happened, is afterwards repetitively started, but is not perfectly re-fulfilled,—there being, in comparison with a previous* occasion, imperfection historically in the conditioning of the egoistic actualisation.

There is yet another aspect in which to present this inquiry. If it should, in the end of these investigations, be made out, as is hypothesised in one of the alternatives set forth at the close of the first chapter, that there is an entity of Mind, which, by

the executive-causation of that which we call Matter, is held in check at all times save those when the entity can and does actualise consciousness, then Pleasure is practically one with the happening of *a favourable egoistic opportunity*,—the failures of nullifying restraint occurring along with just those sequences of the intellectually-inferred material operations which we physically describe as the activities of those specific groupings of nerve ratios,—the Ego then developing advantageously the sensory, etc., experience. This is too early a place to treat the question fully.

But one other point may be just hinted at, with the view of recalling notice to its significance when inquiring hereafter into the higher experiences, viz., that in Pain the consciousness is somehow in excess of the lessened physical activity then in use—that being the very character of the causation in the case of Pain. The fact of the nervous grouping being less than on a prior occasion is somehow recognised; non-impression affects us, and becomes a real event in our experience. This points to some far-reaching consequences. It is a matter which will be reverted to in a later chapter, where an attempt is made to get a working definition of “The Soul.”

§ 15. *Crucial-Proof afforded by the Violent Emotional-Expression accompanying Pain.*

We have reserved for separate mention what we

believe may be held to be a crucial-proof of the law that Pain implies quantitative abatement of prior nervous activity, owing to non-repetition of operation in some of the fibres organised by use into a habitual grouping. This proof is given in the violent emotional expression accompanying much pain. At first sight, it may, indeed, seem that the fact is entirely subversive of the main view put forward in this chapter. It may be asked, if Pain is owing to lessening of impression, etc., and numerical reduction of active fibres, how is it that it may be, and in many cases is, followed by exaggerated and violent efferent movement?

It is well known that Pain (unless the mode of the injury is in itself physically disabling in respect of emotional expression) develops naturally a whole series of attitudes, grimaces, utterances, contortions. The quantity of muscular agitation, on the first observing, even appears often to be much greater than that accompanying the antithetically-related pleasure.

The explanation scarcely can be fully given before the "Will" and the "Emotions," with the whole question of the physical expression of the latter, have been considered in detail. But it may suffice to bring out the special point here relied upon, if we ask attention to two facts: first, that *all* emotion—owing to the way in which the efferent-nerves connect with

the Ego-actualising cerebral molecules—occasions muscular agitation, and second, that ideation, or, speaking more precisely, intellection, uses up intracranially some of the nervous activity in a way of cerebralising which lessens the quantity of that available for the efferent activity which gives outward muscular movement. This latter detail will be better apprehended after the fuller statement of the matter to be offered subsequently in the chapter on the "Will."

By the light of the two facts above hastily put forward, it will be seen that the style and quantity of the emotional-expression arising is accounted for,—if there are reasons for saying that the efferent-activity accompanying these instances of Pain is that belonging to the antithetical pleasure distorted, unbalanced, made violent,—or is, at least, traceable to less-perfectly co-ordinated muscular movements coming into play through some of the other habitual efferent-activities not being supplied; and further, if from the nature of the case the cerebral-reactions which are stirred, instead of being used up intracranially in prompting intellection to the same extent as in the related cases of Pleasure, are perplexed and hindered in that way, and have no other outlet of escapeth an the direct one of the first available efferent fibres. Add to this that an addition is in many cases *volitionally* made to the efferent-activity in a way of snatching at mitigation, and further that a conven-

tional education turns these very circumstances to account for sympathetic and social purposes, and, we think, the violence of emotional expression following on Pain not only is explained, but that it converts into the very crucial proof which was needed for establishing the doctrine that Pain is owing to activity in the neurotic-diagram being made defective, and non-habitual, by its showing a failure of repetition of prompting in some parts of the associated efferent fibres. With respect to the emotional expression being *specific*: it must, as in the case of Pleasure itself, follow the *pattern* of the fibres acting, qualified by inheritance and education.

It is not practicable at this stage to attempt a full illustration of the reasoning. But it may help to an understanding of the case if we point to the phenomenon of laughter as showing how non-repetition of impression can cause huge violence of muscular movement. In every case of the ludicrous (restricting for the present purpose our examples of laughter to that more honest and hearty kind of it), there clearly is defective fulfilment of habituated-expectation, and every one knows how even this simplest throwing out of gear of the rudimentary sensory impressions is enough to set the efferent machinery in play most wildly,—bringing on grimace, bending, tossing of the limbs, and writhing of the whole bodily frame. In these cases the

experience—short of the last extreme of it—is pleasurable; but the reasons for its being so are known,—certain other co-ordinations are integrated incidentally from the very break-down of the peripherally-arising ones. In the worst painful experiences, these re-integrations of co-ordination are wholly wanting; fright itself is owing to ideation stopping blankly, or only partially progressing self-destructively.

At any rate, the phenomenon of laughter explains the violence of emotional expression under Pain in so far as this,—that it shows how easily defective-repetition of cerebration can cause any degree of exaggeration in muscular movement, by unbalancing the habituated finer prompting and restraining of it got from the activity of the egoistic molecule.

The whole topic of the physical phenomena of emotion has been most skilfully treated by Mr. Herbert Spencer, Mr. Darwin, and Professor Bain; all their expositions, we believe, tending to the above conclusion.

The phenomena we have now reached begin to involve, at every advance, the acting of Memory. It is needful to turn next to that subject.

(For list of ancient and modern theories of Pleasure and Pain, see Appendix B, at end of work.

CHAPTER IV.

THE MECHANISM OF MEMORY.

§ 1. *Common Consciousness is Cumulative and Historical.*

WITHOUT some conception of the process of Memory, it is impossible to proceed a step in the understanding of our experience beyond the rudimentary stage of the simple ungrouped sensations. As has been earlier said, even what we term OBSERVATION, and refer so entirely outwardly, is, when it becomes in any way detailed and sustained, a unified internal activity dealing with gradually cumulated reminiscence far more than it is a matter of immediate peripheral impression. The historical cerebration is only checked and verified, as well as prompted, by the current peripheral impressions at a sufficient number of points to secure correspondence;—and we are always more-or-less liable to mistake, from the checking points not being numerous enough, or else not rightly disposed. The object of every artifice of logical method is to reduce this risk to the minimum. All the unified-totalisations of consciousness we have answering to external “objects,” are, in fact,

conditioned by the inner recurrence of historical progressively-massed activity. It is true that this is a more general use of the words "memory" and "reminiscence" than is common. In these instances, we are not aware of the experience as "remembered," but regard it as instant and exactly answering to the situation in which we are. By "memory," "reminiscence," etc., in fact, we really mean an added awareness that the outward occasion of the main experience which we are having in repetition at the moment is not then-and-there present, but that we are in a different circumstantial-situation, though much of the experience of this latter has to be nullified to admit of the reminiscence. There will not be much difficulty in accounting for this differentiating addition of consciousness, which is the specific trait of "remembering," when the Laws of Attention have been considered. But, in the meantime, the only way of simplifying the inquiry into the process of Memory, is to forego for the present the distinction between Perception and Sensation, and include in Memory all internally-conditioned repetitive consciousness, whether it has or has not the addition of being apprehended as answering to the past.

§ 2. *Reminiscence Economical.*

We are not beings adapted for becoming aware of the multiplied properties and possibilities of causation

in even the commonest objects by a single full act of contact and apprehension. Our sense-organs are so scattered in the apparatus, and work so differently, that the simple sensations which even so rude a thing as a stone can give, can only be welded into a collective-apprehension, answering to and standing for it, by a gradually-perfected coincidence of separate sense-activities experimentally got from many failures in infantile life. But when one of these cerebral reminiscent totalisations is once formed, what a splendid economy it amounts to! It enables us to dispense afterwards with full contact with individual objects ~~of~~ the kind. Indeed, we do not, throughout all our lives, come into full simultaneous sensory relation with outward objects of any kind such as we are always supposing that we do. It is not necessary that we should do so, for we have—excepting just a little specialisation of variety to mark the individual case—the cerebral activity which they could give already organised, waiting only for the prompting-cue and the little individualising addition or enforced modification of omission. A much more thrifty process prevails in our adult experience than that of full impressional-contact with individual objects.

How this still further holds good in reasoning, in imagination, etc., will be shown more in detail in the fitting place.

The general fact into which all the cases sum up is this,—the higher our consciousness rises, the more is its quantity in excess of the outward impression currently acting on the occasion ;—the activity causally related to it becomes increasingly one which is internal, there multiplying, reverberating, complicating, perfecting itself. It is into the process of this inner-deriving activity we are now inquiring.

§ 3. *There must be Repetitive Cerebral Activity.*

Modern cerebral anatomy has made the first step in the matter easy. There is ample evidence that in reminiscence we are only conscious in a specific way in so far as the cerebral terminations of fibrils in the sensory and general cerebral system *repeat the activity they underwent in the original act of experience* to which the reminiscence relates. How far that activity extends backwards, along or in the fibre, is a question on which something will be offered later; but there can be no doubt that, for experience either original or reminiscent, there must be activity in the grey matter of the brain at the terminals of the fibrils. That is the locality where occur the rapidities, volumes, etc., which we have seen are the occasioning and quantifying conditions of egoistic consciousness. For every point of reminiscent consciousness, then, there is an answering point of conditioning nerve-activity happening at the moment; for every point

of the activity disabled, omitted, not occurring in any given case, there is a blank in consciousness. In the disease of aphasia, a man may lose consciousness of single letters in the names of things, spelling the names imperfectly.

To state it more particularly,—even with activity in the central molecules of grey matter conditioning actualisation of the Ego, we may, owing to disablement of some of the sensory fibres, lose recollection of some individual things, places, or persons, or of parts of them, down to most minute portions.

This current related-activity of fibres and cells in the brain, both in original and reminiscent experience,—the consciousness being delimitated by its configuration,—needs a name. We venture to propose for it that of THE NEUROTIC DIAGRAM. In the chapter following this one we will explain the phrase more particularly.

The first physiological fact of the reminiscent process is, therefore, this,—a repetition of activity at the cerebral ends of the nerve fibrils *without their peripheral ends being impressed*. For although an initial cue of Impression is required to start a memory, prompt a flight of the imagination, or begin a chain of reasoning, the cerebration can, and does, sustain itself interiorly for seconds, for minutes, for periods still longer, till fatigue or disinclination arises and stops it.

§ 4. *Intercommunication of Prompting Cues.*

But the problem of the process of Memory has a further complication, and, as it is this which greatly heightens its difficulty, we may expect that through it the whole solution must be looked for. An impression which acts as a cue of reminiscence, in its recurring stirs remembrance not only in the organ to which it itself belongs, but the impression of any one of the senses can affect each and all of the cerebral fibres of the *other senses* which simultaneously acted together in the original experience. The sight of an orange may recall its smell; either the sight or the smell can bring back its taste; any of these impressions can suggest the feeling of its touch. And *vice versa*. An explanation which accounted for an impression stirring activity in its own organ of sense beyond the limits of the area peripherally impressed, would not be sufficient: it is required to know how the impression of one sense arouses associated-activity in other senses, the organs of which occupy distinct positions in the brain?

The second question in this inquiry, consequently, is this,—How is the intercommunication of the senses which is implied in acts of Memory effected? In other words, in the case of the sight of an orange causing us to remember all the sensations of feeling, smelling, and eating one, how do the visual impres-

sions through the optic nerves stir into activity the reminiscences of the olfactory, the gustatory, the tactual nerves, making up the whole experience?

The guess at explanation which naturally first offers itself is, that connecting-fibres run from one special sense-organ to another, all the senses so intercommunicating. But it does not need much thinking to suggest an insuperable difficulty in the way of that plan of structure. Fibres *directly* continued the whole length from one sense-apparatus to another would necessarily at some points of their progress cut each other. The brain must have some scheme of construction differing from this.

But let us go back to the point immediately in hand.

It may help the matter if, in the first instance, we do as was suggested at the start,—leave out the specific fact of reminiscence proper. The wonder of the circumstance that, in this interior operation, we recall prior consciousness, is disturbing. It is no necessary part of the primary organic question. The inquiry may for the moment be confined to the one fact of the reproduction of the physiological process conditioning consciousness specifically, without troubling ourselves at this stage as to whether the consciousness is like former experience. In this simpler form the inquiry will stand thus:—

How is it that, in the brain activities systematically

related, such as are caused by conjoint impressions made from without on the separate sense-organs, can be caused, be multiplied, and carried on, in the absence of the outer impressions (excepting just the initial cue) by an internal process, which, in sustained acts of thinking, in imagining, reasoning, etc., is able to maintain itself for indefinite periods; in other words,—how is it that the grey matter at the cerebral endings of the sensory nerves can be thrown into agitation in a related-activity at different points while the grey matter at the peripheral ends is quiet?

Any standard physiological handbook will give the physical details explaining the constitution of the brain and the position of the sense-organs, with the division of nervous substance into white and grey, the mixture of fibres and cells, etc. It is enough for the present purpose to recall that, besides the organic apparatus of the different senses, the substance of the brain largely consists of short fibres and intermixed cells, all occurring in what has been described as a higgledy-piggledy way.

It is a matter which must finally be decided by the disclosures of cerebral anatomy, which, though its advances in modern times have been wonderful, is still very imperfect. Only hypotheses can yet be offered. The following is the one we have to submit, as being best supported by what is known of the facts:—

§ 5. Hypothesis serving to Explain the Phenomena.

The interiorly-maintained cerebral activity requires that the sensory nerves shall, practically, be duplicated; there being, answering to each peripherally-originating sensory fibre, another interior one, running transversely, so to put it, from the cell of grey matter in which the peripheral-fibre ends cerebrally to larger brain cells, where these transverse fibres conjoin. But the scheme needs stating in more detail.

It is known that the agitations which peripheral impression sets up in the outer end of a sensory nerve are transmitted upwards to the particle of the grey matter where such fibres have the other terminal. The unstable nature of that substance makes it unavoidable that the terminal agitation shall spread itself a little beyond the area of the fibre bringing the movement from the periphery,—that is to say, the acting particles of the grey substance are constructively a little larger than a section of the peripheral fibres. If this be so, it is necessary to imagine, first, that of the countless interior fibres of the brain, one is set from the grey cell we are speaking of in a reverse way, having an ending in contact with the grey particle in which the peripherally-originating nerve fibre terminates, the other end of the transverse fibre going to one of the far larger inter-occurring cells or ganglia, in the body of the

brain, where, in the same way, arrive other interior transverse fibres, similarly placed in respect of peripheral fibres belonging to the different special sense-organs; second, that the agitation transmitted from the periphery to the cerebral grey particle in setting that particle in motion is—owing to the area of the particle including an ending of the transverse-placed fibre—communicated to and necessarily reflected along the transverse-placed nerve fibre to the central cell or ganglion, where the agitations arriving together from similarly transversely-placed fibres of other senses, join with it in moulding a *collective-molecule* of grey matter, which can be subsequently agitated by the operating of any one of these fibres from any of the senses which had so acted together; third, that the central collective-molecule (being itself a *dépôt* of nervous force), when so put into repetitive activity reflects, in its turn, the motion back along all the transverse-placed nerves to the particles of grey matter which the peripheral fibres originally set in motion, so reproducing the activity, with all the extensions for which retrasmisions have been organised between first grey particles and collective-molecules,—the Law of Effectiveness coming into play to govern their validity.

By this arrangement, a machinery is got for the repetitive and intercommunicating physiological activity, the process of which we were seeking.

The physiological distinction between original experience got by impression and the reviving of it in reminiscence is this, that in cases of impression the activity is that of the first and second terminals of the fibres (that is, the peripheral end and the cerebral termination in the lesser grey particle), and, in case of reminiscence, the activity is that of the fourth and third terminals,—that is, the end of the transverse fibre in the collective-molecule and the end in the lesser particle. To the question of how, in turn, reflection of the activity arising in the collective-molecule occurs from the lesser grey particle *some* distance down the peripherally-ending fibre, we will return in dealing with “Attention.”

Some further details of the hypothesis will incidentally develop themselves in subsequent chapters; but the general fact of reminiscence seems to be accounted for, if it be borne in mind that the vital process of repair which starts in the moment of use fixes the form of the collective-molecule of the central cell or minute ganglion of grey matter, so that it shall from occasion to occasion structurally represent the conjoint-activity produced in it by the reflected nervous agitations which *last simultaneously reached it*, answering to the then current impressions of an object of experience. The molecule is in this way left with facets so adjusted to the terminals of the transverse-placed fibres as that on its being stirred

at any of them it becomes active at them all; discharging nervous force in all those directions by virtue of being, vitally,—as grey matter,—a storehouse of such force.

How, under these circumstances, can reminiscence possibly miss? Practically, the same activity is reproduced at the inner ends of the peripheral nerves as was caused there by Impression in the original experience. If the required rapidity, volume, etc., of physiological activity causally standing for a certain specific actualisation of consciousness is made to exist, what can it signify whether it arises internally or outwardly? In the former case, the two endings of nerve fibre adjusted in grey matter, which are required for the discharge of nervous energy, are provided by the simple arrangement of *an interior supplementary fibre*.

It is, also, clear that by this method the activity is made to exactly delimitate itself; the fibres being all brought into play longitudinally, without crossing, and, so far as prior organisation has obtained, selectively operating in any cells in any part of any organs. Let it be added that the only limits to the inter-communications which may in these ways be organised are those fixed by the absolute number of the fibres and by the Law of Effectiveness, and the elaborate mode in which the physiological activity propagates itself in sustained thinking, remembering, imagining,

etc., is, we submit, made intelligible. Something will be said later of the distinction between reminiscence and imagination.

§ 6. Facts Supporting the View.

Two or three facts of general consciousness may be quoted in corroboration of the view that the process of reminiscence is worked by and through collective-molecules, which are themselves, in conjunction with the efferent fibres and the reverberatory sympathetic system, the machinery for conditioning the experience of the Emotions. Everybody is aware, from their own experience, that in cases of difficult remembrance, we gradually enforce the details from a centre, having the bulk of the required conception shadowily in our grasp. The emotional experience belonging to the full ideation is there already in nearly complete quantity, and we compel the addition of the missing sensory particulars by ramifying-lines of feeling; there being throughout the interval between the prompting of the reminiscence and the perfect realisation of it in all its particulars of mental delineation, an excess of consciousness, so to speak, compared with the imperfect detailed activity operating at any moment short of the final completing one. Also, whenever sudden and unusual Impression occurs, the same thing happens in an exaggerated way;—shock is felt, extending

by means of the sympathetic nervous system into the thoracic and abdominal regions. The consciousness is, in this vague way, again larger than is accounted for by the area of nerves actually affected by the impression. But, on the other hand, in the elaborated mental experience,—that which we specially call intellectual,—the exactly contrary result happens on a certain stage being reached; prior, that is, to a still later stage being arrived at, when higher reintegrations supervene. Sir William Hamilton long since pointed out empirically that the emotional and the intellectual consciousness are antithetical within certain limits. The manner in which this circumstance turns here into a striking proof scarcely can be fully appreciated before something has been said more in detail of the process by which the NEUROTIC DIAGRAM constitutes itself; but we may briefly add that the abatement of feeling noted in the case is owing to the lessened use which is made of the collective-molecules individually in abstract thinking. We then reduce diversity in the activity of the special sense connections as much as possible. More will be added upon this point subsequently.

For it will easily be seen how the cerebral process of Memory runs into other questions,—those of the higher stages of our experience. There are all the facts of invention, insight, idealism to be taken up into the hypothesis. It is required to know how it

is that they, practically, make thinking exceed reminiscence,—how we arrive at conclusions which stretch the syllogistic premises,—how discoveries and inventions flash upon us in the way of hypothesis beyond our previously verified knowledge,—why it is that we give to things ideal beauties?

In order to render the answers asked for on these points, the mode of constituting the Neurotic Diagram needs to be considered more particularly.

But, before closing this chapter, let us return for a moment to the phenomenon of memory proper. In those instances, as was earlier mentioned, we know that we are *remembering*. The Neurotic Diagram gives partial consciousness of the peripherally-prompted situation as well as supplying the reminiscent one; the egoistic actualisation being able to unify the experience so far as the self-feeling is concerned. In this way memory proper finally implies an egoistic complication with which arises an amazing multiplication of intricate emotional experience.

CHAPTER V.

THE NEUROTIC DIAGRAM.

§ 1. *Mode of its Formation.*

WE have seen that a physical, *i.e.*, an organic activity, in space and time complying with the Law of Effectiveness, must exist in the sensory-cerebral system during an actualisation of consciousness, the one answering to the other chronologically.

In consciousness which can be referred wholly to Impression,—though, as we have hinted, the cases of this first class of sensory experiences are more fragmentary than is supposed,—the activity originates at the peripheral-terminals of the sense-fibres, ascending through the organ to a cell of the grey matter of the brain, being there—according to the previously stated views—reflected to a larger collective-molecule, where association with other sense-impressions may take place: in consciousness of the reminiscent and ratiocinative and imaginative kind, the activity (with just a starting cue of Impression) works in the contrary way, arising in the collective-molecule, and being by its reversed transmissions

reproduced in the smaller cerebral-particle endings of the fibres, and reflected to a greater or lesser distance down the peripherally-ending nerves. In all adult experience, we repeat, there is a large admixture of the reverse-working activity even in what are thought cases of mere Impression, or the consciousness could not be perfect and whole enough to be intelligible as representing "objects." It is only in this interior way that sufficient complexity and scale of diagram of the motion conditioning elaborate consciousness can be got.

The activity propagated linearly between these points in one of the above-described two modes of progression, has, also, what may be termed superficial extension; deriving in the primary cases of Impression from the area of the peripherally-ending nerves operated upon, and being configured in the other cases (the reminiscent, ratiocinative, etc.) by the quantity and location of the transverse-placed fibres which the collective-molecules, by means of the communications organised by use, bring into play with effective simultaneity. In the latter instances, it is obvious that the superficial extension of the activity is not wholly continuous, but is allotted in points and patches, which may occur in any part of the brain, being related to one another only by the linear activities of the communications of the collective-molecules.

In these ways, for every sensation, idea, etc., with their associated feelings, there must be a specific configuration of physiological activity in the sensory-cerebral system, comprehending within its lineal and superficial limits such-and-such central molecules and such-and-such fibres, the intercommunications being very complex in adult experience. It is this executive-activity chronologically conditioning and quantifying every act of consciousness which we seek to name by the words NEUROTIC DIAGRAM; in that manner getting the physiological equivalent for idea, thought, feeling, regarded as facts of consciousness.

As has been before hinted, it is the collective-molecules which give the motion which conditions and quantifies the egoistic consciousness, the agitations of the fibres conditioning what we call our impressions of the non-ego. In the chapter on "The Ego," the point will be more fully dealt with. Also, it seems desirable to postpone for special explanation the very significant part which the efferent nerves play in the neurotic diagram. The explanation is supplied in the chapters on the "Intellect" and "The Ego." Here our business is to establish the general fact of the diagram, and to make it intelligible.

§ 2. *Continuous Fluctuation of the Diagram.*

From the very nature of this self-propagatory activity (propagating itself from stage to stage owing

to every collective-molecule of grey matter being a storehouse of nerve force), it is clear that the diagram must be changing every instant, not only by mere lapse of motion, and cessation in fibres, but, also, by its cues decomposing one configuration by setting up another; although we can, in some measure, by continuing contact with an object, or by management of Attention (a point to be explained later), repeat the diagram, in an analogue if not in itself. A sensation, an idea, etc., with its feeling, implies a brief agreement of the neurotic activity in a practical simultaneity of related occurrence,—the duration of such efficiency, or, in other words, the speed of the modifications of consciousness, being fixed by the inscrutable Law of Effectiveness. Inscrutable ultimately, but we can see—and a very important point it is—that it is by virtue alone of this Law that the diagram gets its effective delimitation; doing so by the simple fact, *that all the activity which does not relatively aggregate itself in the required way, that is, in due chronological and spatial quantity, goes for nothing in consciousness at the time*, not affecting the grouping which does so aggregate itself,—sensation or ideation being efficient from moment to moment accordingly as Use has organised these effective coincidences. Not that the Law is unbrokenly, perpetually successful in giving positive fulfilments of effective delimitation: it can only succeed as far as organisation by

previous use has prepared habitual recurrences of reminiscent-activity, by means of the mechanism of Memory explained in the last chapter. Any one closely watching his thinking will be able to perceive short intervals of obscurity, even of confusion, and will be aware of having to wait upon the process, for the cues to work themselves out,—at times in a very roundabout manner,—the completed thought then suddenly appearing. That there is, at every moment, much more activity going on than appears in consciousness is certain, but, in consequence of this important Law, its hap-hazard occurrences do not impede or disfigure effective consciousness, if they are sufficiently fragmentary. But these fragments, or rather their prolongations—their successors—may the next moment, if they lend themselves rightly to aggregation, come into play most effectively in the neurotic diagram which follows. This appears to be the explanation of what has been by Dr. Carpenter so strikingly named “unconscious cerebration.”

§ 3. *Analogue Diagrams.*

But let us go back a little. We said that we can repeat a diagram; this brings us to an important qualifying point. There can be no precise repetition, either of impression or of reminiscent ideation. If we continue looking at an object, they will not be the same fibres which are impressed—at least not in

the same way—the next second as are being impressed during this one; the rays of light must strike upon the retina with minute alterations of incidence, even if the fibres did not exhaust, and if there was not some more general change of adjustment in the muscular machinery of the organ, which there must be. So of all the other senses. But these modifications have not scale enough to get any practical validity under the Law of Effectiveness; the second impression, for all practical purposes, answers for a repetition of the first and the third for the second, and so on.

It is a point of much importance; for, in this way, *Analogue Diagrams* are stored up, each having connections with the general muscular movements sufficiently approximate to make one analogue substitutable for another in reference to any practical end.

If this happens in respect of Impression, just the same thing occurs in the case of the more complicated diagrams used for ratiocinating, for imagining, etc. As above stated we cannot repeat the action of a fibre in ideating any more than in sensating; in the activity the energy goes forward and does not return: but we can keep up a contemplation, or link together a chain of reasoning, since by means of the faculty of Language we can and do form analogues for ratiocinating, etc., as

minutely and multiformly as by persisting in using a sense we do analogues of Impression. Indeed, there is, so to speak, no limit to the extent to which we can do this by adding the suppressed to the overt use of the names of things. (Some further remarks will be offered on the curious topic of Language in its own place.) It is by the use of these substitutive analogue diagrams that we are enabled to keep a thing before the mind, and to carry on sustained, consecutive thinking.

For, as we shall try to show later, by the use of Language, helped it may be, in some measure, by a merely physical causation operating in the collective molecules, fibres may be made to act together in ratiocination, in imagining, etc., which *never acted together in primary Impression at all*.

Anyone will see that when this obtains to a certain degree the consciousness is no longer strictly reminiscent; it takes on an anonymous character; and, in combinations of collective-molecules of this kind, we get the machinery of the REASON, the IMAGINATION, etc., as distinguished from strict reminiscence, exactly repeating itself.

§ 4. *Method of the Higher Elaborations.*

It will be gathered from all this what a gradual, progressively-perfected labour is the formation of the elaborate neurotic diagrams we use in adult life. The

process of the moulding of the collective-molecule, on which, when the molecules have become related amongst themselves, everything in reference to the conditioning of consciousness depends, needs to be distinctly conceived and steadfastly kept in view. Doubtless, as so much acute reasoning by Mr. Herbert Spencer goes to show, we have a power of receiving by inheritance from our progenitors some molecules already pre-formed for such associatory-activity; this being the secret of transmitted powers, tastes, and tendencies in us, as also of the strange facts of Instinct in animals generally. But postponing that question for the moment, and looking only at the formation of the collective-molecule, at whatever time it may occur, let us, once for all, trace its mode.

The process begins with the simultaneous arrival at the interior cells, or minute ganglia, of reflected impressional-activities in fibres belonging to the different senses, and accordingly as the simultaneity repeats itself with more-and-more multiformity (organised in the act of use), the molecule takes on more-and-more possibilities of unified collective experience from the activity of the different organs. Of the first stages of the organisation we cannot be conscious at all,—not being cognisant in respect of the action of single or only sparsely-associated fibres; we do not have any awareness

till the groupings aggregate themselves to the *minimum* asked by the fundamental Law of Effectiveness. Nor can we know anything of any subsequent operations of a molecule but at the points of it which comply with that Law. In saying, therefore, that a transmitted-activity from a single sense-organ may stir the whole molecule, it must not be concluded that it operates effectively at every point on every occasion of being stirred. Practically, only some of its many facets really tell in consciousness on any one occasion, and these may selectively occur in very intricate fashion, since it is possible for effectiveness to be omitted at any point. Then, again, comes the higher complexity got from intercommunications between one collective-molecule and another, their intergrouping increasing the scale of the neurotic diagram to the limit of our cultivation of mental faculties—a faculty, physiologically regarded, being the name for an effective organised coincidence of activity of this kind.

For, as we before said, it is only when diagrams are in this progressive way formed so as to represent associatively the multiform properties and causal possibilities of the things among which we live, that we are fully conscious of these,—that they become intelligible to us; being so not from full contact on our part with the things (our constitution is not adapted for that, and it never can occur), but from contact—so to speak—with these inner activities

standing for them, gradually formed, not from our experience of any one object, but from the minutely-built-up diversified fragmentary experiences of countless numbers of them in every class into which things divide; the cerebral activity being always much in excess of the peripheral impression, the latter acting as a cue to prompt the former, but enforcing verification in a way which we will point out towards the close of this chapter. It is not difficult to understand how imperfect the consciousness of children must be, nor why imperfectness of representation in every style has such a charm for them. It is all that they can understand, being all that they have the neurotic diagram formed for. On the other hand, in the higher ranges of adult experience, the diagram takes on a metaphorical play, the explanation of which, in so far as it is possible to explain it with present language, must be left to a later place.

Another very subtle point has to be mentioned at this stage, viz., that, as the diagram progresses by accretion, having, indeed, been wholly formed by progressive cumulation in repetitive use, it has only to be modified a very little to give *a wholly different act of consciousness*,—reminiscent, ratiocinative, or imaginative, the individualising addition to the diagram being sufficient for that. It is only by means of this fact that we can understand the enormous disproportion between the rate of *much* of our think-

ing, etc., and the known rate of rapidity of the nervous force; a disparity so great that it must strike everybody practising self-observation. If the neurotic diagram had to frame itself *throughout* afresh for every idea, etc., our consciousness would have to abate very much of its present speed. Of course, in all cases where the diagram has greatly to be reconstructed, through Attention being baffled, and so forth, the rate of consciousness sinks to the speed of the nervous force. The matter will be more fully illustrated in Chapter VII.,—that on the Laws of the Succession of Ideas.

§ 5. *Application of the Views.*

It will be well now, in a rapid, more general way, to apply these views, and see how they explain our experience.

In the first place, the old puzzle about where our memories, ideas, etc., are when we are not thinking them, is done away. They exist potentially in the possible activity of the cues of the neurotic diagram, and they then exist in no other manner. By operating upon the diagram in any of the modes to which organisation has made it amenable, you may modify the memory or the idea accordingly. So, too, the difficulty is got over of the omission of ideas, etc., out of supposed chains of them. There is no such chain possible apart from the action of the neurotic diagram. If

by the hap of the working of its cues below consciousness, that is below the limit of the Law of Effectiveness, there is enforced immediately a pattern of diagram which in prior experience stood for a proximately-formed idea, the idea comes forthwith. If that precise order of the working of the cues is physically interfered with, the idea does not occur in consciousness, but that which does arise may be a very different one. What were the intermediary ideas cannot be said to be passed over; they simply are not. The diagram had a potentiality of them, or some of them. But it is in the great multiplicity of the cues of every idea,—including the possibilities of the use of language and analogue-diagrams,—that is given the explanation of our escape from literal reproduction of the primary order of them. They may be challenged in just as many ways as they each have cues of connection with others which have relations with those to which they have cues.

The facts of what is named as *The Ideal* are in this way made intelligible. Impression, in so far as it complies with the Law of Effectiveness, enforces itself throughout the whole area of its extent, making the disintegrations of co-ordinations felt as well as the integrations, so mixing pain with pleasure. But, in reminiscence, defective portions of the impression tend not fully to appear; only the more perfectly-organised co-ordinations become lastingly operative,—the defec-

tive activity, standing for the disintegrations, gradually sinking below consciousness. Thus it is, that, excepting in cases of high beauty (a point which will be taken up under the heading of "Art"), our memories have a softness which the real objects of them had not; nearly all that long survives in memory coming to have some charm, owing to a practical inability to remember pain after a lengthy interval.

§ 6. *The Overriding Efficacy of "Impressions."*

This brings us to the question which we postponed for a later place in this chapter,—namely, how is it, if, as is asserted, the inner activity, originating from the collective-molecule, is in adult experience far in excess of that deriving from the peripherally-impressed fibres, that the latter can enforce itself over the other, verifying itself and securing that if any part of the impressing object is different, changed, or any way novel, that shall still be effective in impressing us, determining the consciousness?

Let it be borne in mind that it does not always do so. We mistake oftener than we remember; doing so from Impression being nullified by the larger inner-deriving activity of the collective-molecule. Vulgar but very striking illustrations of this possibility may be got from the way in which a clever conjurer will deceive the very senses of beholders. By a skilful use of a few reminiscently suggesting move-

ments, attitudes, and phrases, he will make you not see what is done right before your eyes, and fancy that you see things done which are not done. The same deception occurs in matters of high scientific observation. Astronomers and microscopists see things through their glasses, which, from other evidence, they know are illusions. The explanation of all the cases is simple; it may thus be stated:—

If certain cues of a neurotic diagram are given impressionally, the diagram will work itself out interiorly far in excess of the impression; nor is it possible for the illusion to be discovered to be one unless other impressions effectively come into play, checking the diagram. But, in the bulk of the cases, there is efficient verification, the reason being that in peripheral impression the fibres are appealed to in such a localised mass that there is in them *a packing of all orders of co-ordination*, in a way which commands more diagram-cues than ordinary reminiscent diagrams carry forward from moment to moment. The diagram configured from the collective-molecule, although always a little in advance, is ordinarily liable to be overtaken and over-ridden by the peripherally-configured one, being, in fact, decomposed by it; and, in just that minute space of time, we find out, with a shock of surprise, that we were mistaking. If any one will watch his experience

closely, he will see that its process is one of correcting the startings of mistakes.

This is the rule of general ordinary experience; in extreme cases, however, the inner-deriving activity can again conquer. Martyrs may find the flames at the stake as pleasant as rose-leaf couches.

For the final clearing up of the matter, the great subject of Attention must be examined in detail.

§ 7. *Further Illustrations.*

We may, however, add one remark. Any person in learning a new language will find countless opportunities for observing the process of the workings of the neurotic diagram. Continually its cross-cues work themselves out completely, giving intelligibility to words and phrases which apart from what we term the context would have no meaning. With enough of context anything may be construed, and in the case of some persons, who are styled intellectual, the fineness of the clue which will serve is amazing.

It throws light upon the brain's great versatility in giving ideas, with all the subtleties, even in some cases the oddities, of their associations, to contemplate the—at first sight—amazingly haphazard mixture of fibres and cells which it displays under the microscope. Out of this apparently aimless, topsy-turvy state of things arises the possibility of infi-

nitely multiplying neurotic diagrams, forming them in analogue and connecting them in every kind of way. Without this multitudinousness of arrangement interiorly the brain could not be worked as it now is. The facility is carried to such an extent by it that we can frame temporary diagrams, postponing their availability till a certain signal is given for full activity. It is better to supply an example. I yesterday saw two very old men talking in the street. I had a reason for wishing to mention it by-and-by at home. Accordingly I left the arrangement of fibres and cells making that neurotic diagram in a way of special adjustment, adapted to a particular class of cues. In the family circle, the first mention of the word "old" was challenge sufficient to restart it. We can adjust a diagram suspensorially, so as to come into use when the one we are now mainly occupied with ceases. But again these facts run into the subject of Attention.

§ 8. The Neurotic Diagram and Emotional Expression.

This point, for a special purpose then in hand, was just glanced at in the chapter on Pleasure and Pain, but was not fully dealt with. The neurotic diagram finally, in a very simple way, develops another function,—that of expressing to ourselves and to others our emotional experience. It was mentioned earlier that efferent fibres run to and from the cerebral

molecules with the discharge of nervous energy in which the actualisation of the Ego occurs and is carried on. The efferent fibres are necessarily rendered active by the energising of these molecules, whenever the molecules are themselves acting with the degree of intensity and on the scale of intergrouping which gives the emotional experience. A large proportion of the efferent fibres are under volitional control, that is, to the extent in which such control has been obtained; but there are a number of them which naturally take on an automatic activity, immediately governed by this energising of the cerebral-molecules, the necessary result being movement in the facial muscles, still more extensive activity in the limbs, and greater-or-smaller re-adjustments of carriage, bearing, etc., in the whole frame. Moreover, owing to the way in which the heart and some other parts of the physiological system are regularly dependent for their right operating on the due acting of the cerebral apparatus, the circulation of the blood being largely alterable by the distention and contraction of veins, etc., another set of emotional-signs is rendered possible: these latter, which include such phenomena as blushing, pallor, tremor of the limbs, etc., being scarcely at all under volitional control,—at least, not being so past a certain small range of acquired command by means of roundabout mus-

cular managements, dictated by what are called the proprieties of Society and obtained educationally,—carried further in individual instances by a long habituated striving prompted by sinister self-motives.

In these ways, there is exhibited an elaborate system of emotional expression, comprising gesture, attitude, facial play, modulation of voice, etc. Indeed, it is hardly a full statement of the case to speak of what happens in this manner as being merely "expressional" of emotion; the sensory experience thus developing so reinforces the emotional-consciousness proper, that, practically, the associated sensory experience is not distinguished from it. The heat of anger merges in the more egoistic phenomenon, and heightens it. Fear has its own internal sinking, exaggerating the dread. So of the other passions, which all get this sensory-reinforcement.

But that is not the point we have now specially in hand. What we wished to urge was the fact that the neurotic diagram, as well as internally rendering its specific immediate consciousness, by this constructive connection between the central-molecules and the efferent-fibres refers back again to peripherally-arising impressional phenomena. These expressional signs are in certain examples of them more fully displayed to others than to ourselves: a blush is a very public event, for we cannot see it in ourselves so wholly, so perfectly, as others can.

It is not possible for us ever to be quite sure that we have completely hidden any of these signs from observers.

It rather belongs to a later place to follow this matter further,—namely, when “Conduct” and “Art” are being dealt with. Also, the whole question of the behaviour of the neurotic diagram during volition, and of any power differing from that of ordinary causation which the Will, when acting, may have over the diagram’s construction, must be left to the chapter on the “Will.”

§ 9. *A Focal-Point in every Diagram.*

The inquiry as to what we, for convenience, have named the neurotic diagram, hardly can be closed without an allusion to the conception which so long prevailed time back of there being a Sensorium. It was supposed that there was a recess of the brain where the mind, so to put it, dwelt, and to which all the sensory impressions were transmitted as to a central telegraph office. Latterly, since it has been discovered how little is known of cerebral anatomy, this attempt at preciseness has seemed premature. That in the case of every neurotic diagram there is a kind of focal-point on the integrity of which the whole specific effectiveness of the diagram depends, is obvious; it also is made out that the cerebellum has distinctive functions, and that, be-

sides the well-known localisations of the special sense-organs, certain parts of the brain are used specifically for particular mental processes. Here the details of our knowledge at present stop,—the general inference being, as already stated, that the egoistic actualisation connects with activity in the cells of the grey matter.

In the works of Dr. Lionel Beale, the late Mr. Lewes, and Professor Bain, will be found all the physiological information which is at present attainable upon the points treated of in this chapter.

The neurotic diagrams, let us recall, represent the specific operations of the Executive System along with the happening of which Mind either is constituted or else comes into play actually, owing—in the case of the latter alternative—to failure of nullifying-restraints on the part of the executive causation at those stages.

CHAPTER VI.

PROCESS OF ATTENTION,

§ I. *What Attention Means.*

ATTENTION means many different doings. The process ranges from the simple act of prolonging your look at an object, or turning the head the better to hear a sound, up to the co-ordination of a whole life's activity to amass a fortune, to gain a name, or to serve your fellows. This general statement of the case, however, raises none of its difficulties.

They instantly appear so soon as we make the description detailed. We can have consciousness of a number of things at once, increasing the number by trained habituation; we can—except in extreme cases, to be explained by their own rule—narrow or enlarge the field of current experience in respect of any occasion,—gazing at the whole of a landscape or only at a single tree in it; we can acquire powers of pre-arrangement of the apparatus so as *not* to attend to some things in impressional contact with us, in order the more fully to attend to others. We can even fix Attention beforehand, in a set, periodic way of

postponement, settling, for instance, the hour at which we shall awake. And, in remembering, in ratiocinating, in imagining, we can, within limits, pursue definite lines of ideation to predetermined aims, doing it even to the extent of conserving prejudices and preventing judgments from being corrected.

§ 2. Power of Nullifying Occasions of Consciousness.

It will be found, as we go on, that a great part of what we practically mean by Attention is a power we have of nullifying some sensations, ideas, etc., or rather of preventing the due occasions of them from being actually effective when and as they occur; doing so for the purpose of continuing or pursuing others, preventing these latter from being subversively interfered with by inopportune-obtruding ones. In other words, that which may, in the first instance, be called the natural working of the neurotic diagram,—alike that deriving externally from peripheral prompting and that deriving internally from the central molecule,—can be interfered with, being forced into wished-for orders of succession. How is this done? It may well be expected to be a subtle, a complicated process.

But, first of all, let it be said that it is not an absolute power. It fails in due circumstances as perfectly as it succeeds under its own conditions:

still, it rises from stage to stage of our consciousness, taking on at each higher stage a validity effective—within the limits of the qualifications just hinted at—over the stage next below it. When it fails, there is as good a reason for its doing so as there is for its succeeding at other times.

§ 3. Germ of the Power of Attending.

In a certain restricted meaning, our experience, by virtue of the Initial Law of the Actualisation of the Ego, in its very beginnings is only accumulated by Attention: the rudimentary aggregations of minute impressions—that is organic activities—requisite by the Law of Effectiveness, can only be got by congruent consecutive activity of associated sense-apparatus. That primary aggregation resulting from congruity and consecution, as mentioned earlier, is explained by the fact of Use fixing the availability of the sense-machinery preferentially in the line of the first large physical coincidence. Here is the germ of the practical power; but, for the purpose of the present inquiries, it would be better to style this merely vital habituation the germ of the apparatus of Attention rather than the germ of Attention itself. It is true that this circumstance of muscular use historically recording itself in the machinery and tending preferentially to repetition, is that which alone makes it possible to preserve an attitude, to continue a move

ment, or to better adjust the frame—or some part of it—in relation to an object, so as to prolong an impression, follow up an exertion, or satisfy the promptings of aroused observing; still, in the regular simple cases, these things are done so directly that it scarcely can be said that a volition is needed: it is not that which people understand as attention on our part, egoistically, so much as it is a mere co-ordinated, consequential working of the physiological apparatus. But, as we shall have to point out, this is the power with which Attention works, so to speak.

The word “volition” has just occurred. Throughout this and the immediately following chapters, volitional acts are necessarily continually implied. The subject of the Will itself is dealt with in detail in Chapter XII., after some moral questions which run into its consideration have been treated of.

§ 4. *Muscular Aids to Attention.*

Another preliminary remark has to be offered. Earlier we remarked that Impression, *i.e.*, peripheral prompting, had in the first stage of our experience—that is in the lower ordinary grade of it—a predominance over the inner reminiscent-activity, by virtue of its operating in a massed way upon all the nervous ratios throughout the whole area of contact. This excessive efficacy of Impression (or peripheral prompting), indispensable as it is for connecting

us with the physical world and its novel possibilities, would be a huge stumbling-block in the way of our optionally affecting the peripherally-framed diagram, and would almost prevent the reminiscent one from being framed at all, if it were not for the easy action of the muscular machinery of the leading senses in pursuance of volition, and for the locomotive ability of the frame itself. We should be compelled to attend to impressions *willy-nilly*, that is, if it had been possible that we could have had them at all: Attention would not have been in question, for we should have had no option. But this is so far provided against, that, if we wish to stop a visual impression, we can do it effectually by voluntarily dropping the eyelid. With less perfection of control, we can impede an auricular impression by turning the head, or, at the worst, by putting the fingers in the ears. As we go further in the list of the special senses the power becomes more difficult. Tactual impressions, as regards the extremities, may be broken off by a mere withdrawal of the finger, the hand, the foot, the head; but to stop persistence of bulkier impressions at some other parts we have to alter the position of the whole frame. An experience of taste, once having taken effect, can only be shortened by very roundabout methods of operating on the palate. From an odour there is no means of effectual escape so far as its

atmosphere reaches; there being only the clumsy, temporary mitigation of forcibly closing the nostrils till we have walked, or been conveyed, far enough away. But, in all these cases, we can, more-or-less effectively, defeat the tyranny of Impression by evading it. It has to be granted that the experience referred to is of only very rude kinds; in all the instances, the sense-organ is acting largely, if not throughout its whole field, in a simple way, and we affect the sensation only in the wholesale mode of stopping it altogether. Humble, however, as these weapons are, they must be included in the arsenal of Attention. In abstract thinking they are really used; it is the natural course, then, to turn the eyes away, to seek silence, to remain fixed in posture.

Something answering to this power of arrest, of cutting-short, holds good in reference to the inner-deriving reminiscent, ratiocinative diagram. We can stop an unpleasant memory, or check a train of reasoning, by giving a general topsy-turvy shock to the neurotic diagram, so huddling up the consciousness for a second. It only operates for a very brief time: then, the reminiscence or the argument may tend to reframe itself. But the disabling shock can again be repeated. It is mainly done by the use, overt or suppressed, of the Language-faculty. To utter the words, "I will not dwell any further on

that," or even to think this or any still shorter exclamatory phrase with an inaudible stirring of the speaking organs, is enough to arrest the prior ideation, *for it brings into play the over-efficacy of Impression* to disturb and decompose the reminiscent diagram, just as truly as if some one had plucked you by the arm or flashed a vivid light upon you. Most people aid the matter by having associated-volitions for an abrupt bodily movement when they wish to stop thinking. Still, it has to be repeated that this advances only a very little way the explanation of the process of Attention and the means with which it works. It only explains how the inner-deriving diagram, like the outer-deriving one, can be stopped altogether.

§ 5. *The Higher Phenomena.*

Facts of a higher, more complicated sort, need to be accounted for—those offering when a sense is not acting uniformly, but with diversification, and those arising where reminiscence, ratiocination, imagination go forward, but are made to do so, practically, in a particular way. How is it, for example (taking first an old example of the lowest grade of cases), that we can single out one instrument from a full orchestra, say the flute, and follow its notes alone; the brazen clangour of the trumpets and the boom of the drums sinking into silence until we relax the narrowing of

the attention, when their sounds tumultuously break in again? And how is it that a man can fall into a reverie of thinking in a crowded market-place, or in a ball-room, losing all knowledge of the bustle for a time, and being able there and in other noisy places to pursue a train of thinking, more-or-less successfully, in spite of the inner-arising distractions of the collateral reminiscences which must also be started at every step?

If these typical classes of cases could be solved the key would be got for the others. First, we will cursorily state the great main facts on which rests the explanation we offer, applying them afterwards.

§ 6. Aggregation of Organic Activity needed for Consciousness.

By way of beginning we may point out the practical mode in which a circumstance named earlier operates; we allude to the fact urged more than once, that, under the fundamental Law of Effectiveness (indeed, as constituting that law), the *minimum* aggregations of Impression, in time and space, required for consciousness can only be got by a real, if very minute, continuity of action in the machinery of the sense-organs, which is provided for by the primary vital habituation giving the first germ of Attention's powers, but to which

we hesitated to apply the name of Attention proper. For the details bearing on this point, reference may be made—so saving repetition here—to Chapter II., where the facts are given as the basis of the Law of the Actualisation of the Ego.

Doubtless the exhaustion of the special sense fibres which have just acted in any sensation comes in to increase the effect, but, according to the views earlier put forward, a fixed arrest or equivalent relaxation of this activity is enough to veto sense impressions.

True, as is above hinted, this aggregating activity can scarcely be said to belong to Attention in cases where attending is not needed to be protracted, being then performed habitually; but the question here raised is the very different one, whether volitionally arresting the supply is not a primary power of Attention? If by a sudden fixing of an organ, or of the frame generally, passing, it may be, gradually into the listlessness of relaxation, it follows that certain impressions cease to affect us when it is wished they shall not affect us, then that is one means of Attention, and it does not signify whether it be termed a positive or a negative means. In this way, it comes about that it is not always needful that there should be used the extreme methods before mentioned for temporarily disabling the impression-receiving organs; the eye need not always be closed in order not to see, nor the head turned away not to hear.

and so forth. The organs may be open, but, if their locomotory apparatus is fixed, they do not effectively act.

Possibly, it should be added that if any one were to set himself to test the matter in a direct way, it is hardly likely that he would succeed in that mode. His observing the organ in order to find out if it would cease to act would be a means of prompting the habitual cues of its acting. The point to be decided is, whether what has been pointed out is not exemplified in Attention as it comes into play when the process has been started in natural ways? The opportunities for detecting this power in play are afforded at the moment of returning to sensory impression from a fit of reverie; also, cases where observation has to be prolonged by volition, and when the sense-apparatus has to be worked more finely than ordinarily in attending *intensely*.

§ 7. Partial Interference with Aggregation Sufficient for Nullification.

But the larger matter into which the above-named point runs needs stating in another way. It is clear that, (1) whether or not effective aggregation of sense-impression require a related activity of the locomotory machinery of the organ, the omission of which is a part of the means of Attention, or (2) if aggregation be got necessarily by the organ's acting under the challenge

of Impression without habituation being needed to give continuity, such aggregation, in the one way or the other, is indispensable for consciousness. The point has been discussed in an earlier chapter, but it may again be illustrated here. Every visible area is divisible into portions singly below our range of vision, but which, brought together, at once come into sight;—in other words, a visual sensation asks a cluster of rays. Just so, such a “sound” as we can hear is made up of a number of vibrations, none of them audible separately. Each touch is a collection of countless little contacts. Every taste consists of a grouping of minute activities. Every odour includes tiny multiplicity.

The important additional consideration arising out of these facts is, that, apart from the possible barring of the efficacy of the organ acting as a whole by fully stopping its aggregation in the ways we have spoken of, Impression may be made practically non-effective in consciousness while aggregation is going on, if only the aggregation be *interfered* with sufficiently. For the subtraction of any one of the minute units of Impression from its grouping, no matter from what place in the series it may be taken so that its absence prevents the required totalising of the grouping in time and space required by the Law of Effectiveness, *precludes the sensation altogether*. It does so because there is failure in effectively setting on foot the

cerebral dynamics required for executively-modifying the neurotic diagram so as to give an actualisation of the egoistic consciousness in respect of the occasion.

Take sound as the most manageable instance. It is known that, for the average human ear, a sound-vibration to be appreciable must last for nearly the ninth part of a second. Just for the sake of illustration, let us say that a hundred vibrations must be serially linked in order to give that aggregation, then the nullification of any one of the hundred would be enough to defeat the sensation. It might be the second in the series, or the ninety-ninth, or any one between them; it being sufficient to prolong non-sensation indefinitely if blanks are introduced often enough to prevent a hundred of the units of Impression from following one another without a break within the *minimum* limit of time asked for a sensation.

Impressions—in the way of peripherally-prompted organic activity—might go on being made for ever, and if these nullifying breaks were properly introduced, we should not know anything of the occurrences. The same thing must hold good of all the senses.

To understand the practical working of this rule, we must go a step further,—that, namely, to be stated in the next paragraph.

§ 8. *Peripherally-Running Fibres can be Blocked
at the Cerebral-Endings.*

In a previous chapter we raised the question, how far the nervous agitation originating in the collective-molecule was, in turn, reflected down the peripherally-connected fibres by the particle of grey matter at the point of junction in the sense-organ, in the same way as the outward-originating activities were reflected down the inner transverse-placed fibres. That there is such a back-current seems to be quite clear. If a man thinks of a taste he has intensely enjoyed (which intensity in reminiscence would mean great activity of the collective-molecule), his mouth will water, and he will have the gustatory experience. Taste is, perhaps, the most striking instance, from its working so massively, with such little division or restriction of field; but all the senses more-or-less furnish like evidence. In cases of delirium, of some forms of chronic insanity, of morbid illusion in any way, the retransmitted currents persistently triumph over the peripheral-prompting; the subjective sights, sounds, etc., blot out the objective activities. The process may be traced operating in less striking ways; tell a man what to look for, and he sees it more easily.

But if a nerve-fibril is occupied by an inner-originating current descending outwards, it is obvious that the peripherally-originating current will find its way blocked in ascending.

§ 9. Disabling Power of Cross-Cues.

Now let us recall how the different ratios of nerve-fibres in each sense appear to be mixed more-or-less in every part of the field of the organ. There may be some massing, speaking comparatively, but we find that a pattern may transpose its colours, or a tune its variations, just as may happen—within certain harmonic limits of which we will speak later. Take into account, further, the countless cross-cues which must be unconsciously stirred at every step of the progress of a complicated neurotic diagram as it goes through its swift continual change, appealing to every sense for all its stores of reminiscence. It is not difficult to see that the effect of this must be reverse-currents in so many fibres that, in intense thinking, there will be a general disablement of the sense-organs for outward impression, owing to the aggregations being impaired in the mode pointed out above; fibres being nullified here-and-there, very haphazardly, but in number enough and in positions sufficiently apt to prevent any area from effectively totalising the impressions. In fact, we come upon a process for enabling ideation to conserve itself by precluding Impression, simply by taking possession of the machinery: nor could reminiscence be dislodged but for the over-efficacy—before spoken of—which Impression has when made to act intensely, it then massing all the ratios in the area operated

upon. Thus, although so soon as a man begins to think consecutively his senses darken and dull,—as he goes on thinking more intently the light fading utterly from his eyes, the sounds ceasing wholly in his ears, leaving his outward frame a dark, still statue in the sunlight and amidst a crowd,—yet a touch on his arm or a voice in his ear will rouse him, or, if these fail, a shake or a shout will do it; since the disablement of individual fibres is not omnipresently effective enough to nullify the overpowering massing of ratios in those special, outwardly-aggregated impressions. For the extreme cases in which it does fail, you must go to mesmerism in one or other of its forms. But the point must be pushed a little further still, for—

The gradual, progressive way in which the organisation of the neurotic diagram takes place must be kept in view. The apprehensions we first form of things are the rudest, roughest, most fragmentary, least fully-cohering (as the liking of children and all uneducated persons for caricature shows); the diagrams are perfected by gradual additions of further intercommunicating central-molecules, now taken on at this point, now at that. Perfection of diagram, therefore, carries with it increased multiplicity of cues, incidental as well as strictly-formative ones, at every point of it. It obviously follows from this, that the more intensely, that is, the more minutely

you use the molecules in a diagram the more widely its cross-cues come into play, forbidding interference with it by preclusively debarring the machinery from other formations which might compete with it. In a word, in proportion as you in current use intensifyingly narrow the area, you disable the machinery beyond those limits from acting with effective aggregation. This working-rule gives the explanation of how it is that the power of Attention rises so rapidly; each addition of intensity heightening the effectiveness more than it would seem that it should do.

•
§ 10. *The Eking-out Power of Fragmentary Neurotic
Diagrams.*

Another remark has to be made. It necessarily follows from the mode in which the diagrams are formed, namely, by added junctions, that we must have fragmentary groupings of collective-molecules; having, indeed, far more in number of these than of the perfected full diagrams. These fragments of diagrams, organised—so far as they extend—by hasty, vivid impressions, serve a great use in Attention, for they are capable of fitting in with, of eking out, and completing at this-and-that stage prolonged reminiscences, ratiocinations, imaginations, the diagrams of which are interfered with partially by the rate of the thinking being from any cause diver-

sified, accelerated, or retarded. These fragmentary analogues of different rates, etc., are as necessary as the fuller analogues to which reference was earlier made—indeed, long-sustained consecutive thinking could not be carried on without them.

Perhaps the great practical importance of this point will be better seen if we turn to the mode in which Attention fails.

In cases where Impression chiefly is acting (that is, where reminiscence, ratiocination, etc., are not playing much of a part), our attention is quite at the mercy of vividness or intensity—being aided by the natural working of muscular movement in the case of the senses having full volitional control. In looking at a scene in a merely general way, anything moving attracts us—the flight of a bird, the flashing fall of a cascade, the waving trees, will draw our regards from the still objects; but if among these latter there be one showing colour, it might successfully compete with the things in motion. A shrill cry from another part of the scene might cause us to turn the head wholly away. But if when gazing at one thing moving, another in the line of vision moved quicker, or if beside one patch of colour another were to show of a fierier hue, shift the eye we must—that is, if we had not some motive to the contrary stirring a volition. These latter words, of course, imply that Attention proper in reality

only arises from the inner-deriving diagram, that it has no strict meaning in reference to the peripherally-formed one; massing of Impression there reigning supreme, if there be no mixture at all of the inner activity.

But let us carry the illustration one stage further. Even when the inner-deriving diagram is obtaining, and we are remembering, ratiocinating, etc., we are, as before stated, still always at the mercy of the over-efficacy of Impression, excepting in so far as we provide against it by preclusively disabling its aggregation through intensifyingly narrowing the respective areas of the diagrams we are using. In ordinary practice, we only try to do this to just the extent of keeping the rate of the inner diagram enough above the intensity of the impressions of the things acting about us at the moment to hold them sufficiently disintegrated. But it is apparent that in scarcely any case short of an artificially-attained solitude (we do seek these in studies, libraries, etc.) is the intensity of the impressions a fixed, continuing one. Rather, it varies from second to second, and the great bulk of the business of Attention lies in perpetually correcting—that is, in quickening—the rate of the inner-deriving diagram, so as to overtake impressions, disintegratingly, as they begin to be effective from heightenings of intensity. A very little self-observation will convince any one how im-

perfectly our common thinking is carried on from this very cause. It is always being interrupted. Now a sound breaks in—somebody near us has raised his voice; now an object makes itself seen—more light has fallen upon it. In the case of every one of these in-rushes of Impression we have to go back, more-or-less, in our thinking; to repeat bits of it, to patch the diagram here-and-there with fragments of higher rate, that is, higher in the power of decomposing impressions. But there is yet an additional observation to be offered. The inner-deriving diagram has interior challenges of distraction as well as outer ones; it may, at any stage, start the cues of ideas, etc., more interesting, more vivid, than those belonging to the reminiscence, the reasoning, the imagining, requiring then to be pursued. These inner variations of rate have, also, to be provided against.

§ 11. *The Working-Rule of Attention.*

In fact, the capital problem of Attention may be stated thus:—It is, *how to make the neurotic diagram regulative of its own speed, so as to be able to override distractions by going beyond them a little in rate.*

This is achieved by the simple plan of using the diagram larger than the direct requirements ask, making it to include imagination of the consequences of success and failure, which, by the operation of their own cues, heighten the activity of the diagram

as it threatens to be disintegrated from any quarter, reinstating it; and, by piecing with the fragments of diagrams of higher rate, making the experience practically consecutive in the required direction.

It is another of the natural arts of our organisation, having all the effects of the highest skill.

§ 12. Attention need not be Perfect.

Before speaking, finally, of the way in which all the above means of Attention are economised and helped by the use of the Language-faculty, let us point out a further great practical easement which obtains—namely, that which arises from the fact that Attention itself needs not to be perfect. In practice, it is enough if distraction is reduced, without being abolished; only it must be reduced to a certain limit at the least. For ordinary purposes, we have not in our remembering, reasoning, imagining, to be made perfectly proof against impressional-activities. This would be to suppose that every thought asked the whole of the apparatus. It is only in moments of critical thinking that the disintegration of Impression is made absolute, the light fading from the eye, sounds stilling in the ear, till we become unconscious of where we are and who is about us. We can think with surrounding objects still present to us, knowing perfectly both our place and our companions; and this modification of the rigour of Attention holds good,

also, of the within-activity, as well as the without. It is not requisite for our pursuing a chain of reasoning, etc., that all the thoughts which are cross-suggested by it should be wholly banished; we can continue the definite reasoning, aware, more-or-less, of these—when logically considered—irrelative ideas, just as we are aware of the table, chairs, and other furniture of the room in which we sit pondering. But this collateral awareness, though it may be generally tolerated in some degree or other, has necessarily to hold itself liable to alteration at any instant (it does, in fact, so alter in value from moment to moment), and it must vanish wholly whenever need be.

The explanation is given in the fact earlier stated in brief—that adult persons, excepting in the nearly impossible cases of perfect novelty, never have mere simple impressions in their consciousness, excepting when a current act of ratiocination, etc., reduces the operations of things around them to their primary impressional value by *dissociating* them from their customary reminiscent associations, precluding the inter-groupings of different senses needed for those associations; this dissociation for the moment of the reminiscent combinations being a large freeing of the cerebral machinery, and practically large enough for much of the ordinary needs of Attention. An old illustration will make the point clearer.

Suppose that, in looking through the window, I see an apple hanging on the bough of a tree. Everybody knows that in so describing the consciousness resulting from the gaze, I am describing far more than the visual impression I get. The words "apple," "bough," and "tree," are reminiscent phrases, and my use of them shows that the mind is working in a very complex way in the experience. What my eye furnishes are the sensations of some stains of colour, along with—if we choose for reasons of intelligibility to go beyond the strict bounds of the illustration—some lines representing an irregular figure and demarcating the special patch of colour on one of its limbs into a disc. Does not everyone see what a disengagement of parts of the cerebral apparatus it would amount to for my apprehension of the apple on the tree to fade into this mere optical impression? It would be a great diminution of the challenge made upon the brain only to apprehend it as "fruit," without it being specialised as apple, and it not being a matter of remembrance that it was on that particular tree.

This abating process may always be traced acting more-or-less. At this moment, I hear the sounds of the clock ticking on the mantelpiece to my left, but I know that if my thinking happens to deepen to a certain degree in the next moment, then the sounds will cease to be recognised as clock-tickings:

they will become mere noises of their own impressional value only, in which dissociated state they will be but a small distracting of Attention. But, if meditation becomes still more intense, the sounds themselves will cease in my consciousness. If, after the reverie ends, I should be fortunate in my self-observing, I shall perceive the ticking re-emerging; with it will come the shape of the desk and table, the pattern of the carpet, the hues of the paper on the wall, the bright square of the window, and then the glimpses offering through it of the world beyond. The point we are urging specially here is this,—that, for common purposes, it is enough release of attention from surrounding objects, or accompanying thoughts which are not wholly pertinent, if our full complex apprehension of them is *partly* disintegrated: the intelligible grouping dilapidates and fades, but, in ordinary experience, before the simple impressions of the objects about us quite disintegrate, we become reminiscently aware of them again, owing to the attention itself altering.

§ 13. *Arts for Minimising Attention.*

This possibility of *minimising* Attention has been developed into a wonderful means of perfecting its working; a very great part of our modern Science being the result. A simple representative neurotic

diagram framed of mathematical symbols and logical formulæ is used for the thinking a matter out between-stages, in place of the full diagram of the real objects. It is a surprising saving. When once the habitual consecutions of the rules of the notation have been organised, there is scarcely any impulse to irrelevant transformations of such a diagram: it runs forward, one set of algebraic symbols, or syllogistic phrases, propagating another directly. The management of Attention which is required arises rather out of the risk of failure in pushing the energy far enough forward than in a breaking up of the pattern internally, for the chance of interior distraction arising is made very small by the artificial simplicity of the diagram. At each stage for applying the progressive calculations and ratiocinations, the larger style of Attention must supervene, ensuring that the application is rightly made; but, that done, the diagram may simplify again, becoming merely technical, the attention entrenching itself for another secured effort.

The cumulating economy in Attention in the case of acts which become habitual is got on this principle. We may go on talking while playing the piano; we may read and think of something else; we may go about the house, or along the street, without knowing we are walking, yet avoiding all the obstacles in our way. This apparently

mysterious facility arises out of the muscular activity coming to have connecting cues with *all* the special senses, and not needing that they should be associated among themselves to prompt and guide it; single impressions from any one of them will control it, and you may change from one sense-cue to another, without having in consciousness a complex diagram at all. If utter simplicity of diagram is attained, and the activity becomes automatic, Attention ceases,—there is no longer occasion for it. But, short of this, the principle explains how it is that somnambulists do their physical feats, and how in fever, madness, etc., such marvellous things may be done. The smaller the number of senses operating in association for any act (so that they are not insufficient) the better, since the risks of distraction from the starting of cross-cues is proportionately lessened.

Now let us take the reverse of the case. The strained attention needed in performing unhabitual, or only half-acquired acts, is owing to our seeking to bring every sense capable of association with the effort into full play, so that we may get a fresh eking-out or supporting cue to the progressing muscular activity as others fall short or in any way fail. But, so soon as efficiency has been attained and alternation of cues fully obtains, the exactly contrary process above sketched begins, and, by

yielding to the now non-disturbing distractions, we gradually relieve the attention by dissociating the conjunctions; the habitual associations used becoming as simple as the nature of the doing admits of.

§ 14. *Use of the Language-Faculty.*

But it is—let us now repeat—by the help of the Language-faculty, including its covert as well as its overt use, that we succeed in Attention. It comes to the aid of all the other means, giving to them possibility of repetition, of reduplication,—in fact, of nearly unbounded iteration.

Previously, mention was made of how by the utterance, or the faintest muttering of an exclamation or a phrase, a shock may be given to the internally-deriving neurotic diagram, just as an abrupt movement, jerk, or tension of the sense-organs, or of the frame generally, can dislocate the outer-arising diagram. That, however, is only the mere negative service of the Language-faculty. Its positive uses are far more numerous, elaborate, and valuable.

To put the matter into a single sentence, Language enables us to revive the neurotic diagram whenever we will, and to repeat it consecutively as often as we like, or nearly so. The name of a thing is the cue to its diagram, and the utterance of it, covertly

or overtly, by virtue of its being an act, has the enforcing value of the over-efficacy of Impression we have spoken of: consequently it can (in ordinary cases) command the sensory and cerebral machinery preferentially, cutting short the formation of the displacing diagrams just as they arise.

For the name, by its own variations of hap in utterance,—covert and overt,—has connections with all the correlative analogues of the diagram, whole or partial; we can, therefore, by means of it, use all the stores of reminiscent combinations the brain has of an object, an occasion, or subject. A neurotic diagram is so quickly decomposed by the action of its own cues, and the literal recurrence of it is made so impossible (until after rest and repair) by the exhaustion of individual fibres, that it would be impossible to keep an aspect of a matter before the mind, but for this intervention of Language with its multiplied connections among the analogue-diagrams.

It is not possible to describe the subtlety of some of the operations of the faculty, but the general process is this:—

Whenever a neurotic diagram is fading, and the practical purpose of it has not been attained, we can, by using the last second of our consciousness in respect of it to muscularly recall some fragment of its verbal description, force the diagram to reappear in one of its analogues; or, if it be a diagram forming

part of a ratiocinative, etc., series, we may prevent wandering and secure the right progression by summing up the advance made by it in some word which serves as a cue for its perpetuation in the succeeding heightened-diagram, now proceeding at this point, now at that. (This aspect of the subject will be found returned to in the chapter on "The Intellect.")

If it should be asked, what of the dumb? Well, they are deaf,—one of the sources of distraction is, therefore, closed in their case. Without going into the question of how far they may construct and use something substitutive for language as commonly understood, there is no evidence of such persons having powers of complicated, long-sustained attention, as distinguished from the merely monotonous kinds of it.

Several writers have pointed out how little we are commonly aware of the extent to which we use the Language-faculty in the covert way. This is made more apparent in the case of old people, and of persons who live much alone, monologue becoming with them more-or-less overt. Under the stress of excitement, or in delirious weakness, or under the influence of intoxicating stimulants, the use of the faculty ceases to be a suppressed one;—it is then shown to be the constant accompaniment of thinking.

§ 15. How Excitement Acts.

Finally, some reference should be made to excitement as a means of interfering with, and of limiting, Attention. In certain highly-excited states, you may receive bodily hurts, etc., without being aware of doing so,—that is, attention is not drawn to them. What has been said before almost makes a special explanation of these instances unnecessary. Excitement does not come of itself. It is the consequence of a large use of the sensory and cerebral machinery in very elaborate neurotic diagrams already obtaining; and this, as we have seen, implies a nearly perfect preclusion of the fibres generally from being used in other ways, cross-cues occupying them with back currents sufficiently numerous to prevent effective aggregation: further, this result is aggravated by the general effect of the excitement being dislocatory in respect of any other forms of use of the frame itself than the special ones causing the excitement. In both these ways, the ordinary over-efficacy of Impression is neutralised.

Some insight is in this manner got into the mode in which prejudice can prevent the modification of opinion. People only have prejudices on points which interest them greatly,—that is, so soon as their views on the subjects are attacked, excitement sets in from sudden collateral enlargement of the diagram, which

works in the above preclusive manner, the general agitation further helping to disable the whole system from alternative formations of the neurotic diagram.

The above sections comprise the items of such explanation of Attention as we can offer. Before we say anything of the ways in which Attention holds good, also, in the moral experience, repeating itself at every stage with more-and-more of sublimation in its style as the Will is elaborately brought into play, let us apply the views in accounting for some of the cases of the lower grade, selected so as to be typical.

•
§ 16. *The Views applied to some Typical Cases.*

A schoolboy getting his lesson by mere rote, opening his ears to the sounds around him as he drops his eyes on the page, and letting his raised eyes the next second rove as he repeats the sentence he has looked at, is the perfect example of Attention working at its lowest. He is depending upon the collective reminiscent molecule being framed by mere haphazard conjunctions of repetition, accidental fragments of Impression gradually cohering. His method of using all the senses he brings into play in reference to the occasion will simply give him a continuous series of impressions in a non-enlargeable mode;—he may, parrot-like, get to repeat the words, but he

will know nothing of their meaning. The exactly contrary mode of using the senses, so as to make them give cues to separately-complete diagrams by the impressions enlarging into associated activity with other sets, is supplied by the conjurer giving a performance of second-sight. He, at a glance, will take in the attire, facial characteristics, etc., of many of his audience. In that short space, dispensing with all repetition, he has attended in such a rapid yet perfect way by a single sense, that he will, by the covert use of the Language-faculty, transform the optical impressions into equivalent cues of the other senses, and work out completed diagrams in every direction throughout the cerebral apparatus.

As showing yet another mode of attending, take the case of an intelligent person hearing a narrative, or looking at a representation of something which is not wholly understandable by him. It can be seen that every sense is stirring; he is wholly alert; the eyes will roll; he listens strainedly; the limbs twitch, or the frame gets wholly into motion. He is ransacking every sense for cues with which to frame an explanatory diagram. On the other hand, if a man wishes to attend to the impression of a single sense, he does what he can to still the other senses. If he wants to hear sounds, not only will he remain motionless but he may close his eyes.

This brings us to the most striking case of mere:

sensory attention—the possibility, spoken of earlier, of concentrating your attention upon a single instrument in a full orchestra, or listening only to one voice out of a whole choir. The explanation of the wonder is, that in intensely attending, you momentarily throw out of gear all the machinery excepting the one little area of impression, by minute muscular shock of the aggregating process, and, if need be, the use of the Language-faculty covertly; and that then there is a sudden enlargement of the inner-deriving neurotic diagram from the nucleus of the restricted area of excepted impression, which by multiplication of back-currents in fibres by cross-cues, precludes impression from being effective in any other part of the organ.

Now take the other class of cases,—those where the attending wholly ceases to be peripherally sensory.

It is superfluous to point out how, in the case of our working with the inner-deriving diagram, we strive to lessen all competition of the diagrams outwardly started by Impression. We retire; we seek quiet, dimness, bodily rest; either these or some monotonous or recurring impression or activity,—the murmur of a stream, the rustle of leaves, or, in the case of using activity, the slow pacing of your room; things which only arouse the general energy leaving it to be appropriated, and by thus occupying the unprotected senses in a simple, unsuggestive way, prevent their becoming distractivē by a lending of them-

selves to activity of a more complex but then ill-fitting sort. At certain junctures, activity of this last described kind may be more helpful to Attention than non-activity.

The process of reverie in deep thinking, and the general modes in which internal attention is conserved and made to progress, are thus, we hope, made intelligible. The ends are gained by repeating the diagram in analogues, when need be, and carrying forward its development in a specific direction by use of the Language-faculty, the rate of the diagram being made self-regulative by including in it the consequences of success and failure; further aided against distraction by consciousness needing an aggregating use of the machinery of the senses, which may be thrown out of gear, and also, by the multiplication of cross-cues as the diagram increases in complexity,—that is, as it is used intensely in progressively narrowing-areas, the back-currents so set up in the cerebral endings of the peripheral fibres precluding their use impressionally.

Only in a few of the extreme cases of *non-impressibility* by what would seem to challenge Attention is illustration or detailed reference feasible.

It is matter of common experience, that the weaver does not for a great part of his working-time hear the rattle of his own loom, nor the forgeman the roar of the iron furnace, nor the miller the clack of his

wheel. Any of them can hear the noise at any moment they choose to listen for it, but, in the absence of that purposed attention, the impressions habitually sink out of consciousness. It is a case of habit, for the non-impressibility is only gradually acquired. What is the process at work in these instances? It is plain that they are cases in which, under the moulding of perpetual minute distractions occurring now at one point now at another, the aggregating machinery of the senses acts at a rate so specially set that, no matter how they may intermix themselves, it omits those particular steadily-recurring impressions, but takes up all others arising in the situation. In proof that this is so, alter the rapidity or the volume of the noises of the loom, the furnace, or the mill-wheel, so that their rate becomes one for the omission of which the adaptive preparation has not been made. The miller, the weaver, the iron-smelter, hears instantly. It is true, if the alteration is not too great, he will very soon readapt the order of omissions, and, by leaving out the aggregations *differently*, again nullify the groupings required for effective impression. The perfect exactness of intricacy with which the periodic disintegration must be arranged is amazing, but that it affects the impressions which are received—as necessarily must be the consequence of the sensory machinery being specifically set otherwise—

is shown in another way. If the mill-wheel stops altogether, not merely does the previously unheeding miller become aware of it, but he gets a shock. The fact is, he had adapted the working of his sense-machinery for the continued operation of that impression, though kept below consciousness, and for receiving the other sounds with the degree of modification which that implied. But the stopping of the one set of impressions left the setting of the machinery not quite perfectly adapted for the receipt of the others. Shock is the necessary result. Indeed, for a second, the sounds in consciousness are in tumult.

What underlies all this is the fact, that the muscular activity can, in its own propagations, habituate itself to an order which is practically non-coincident with the activity of the other senses. The result is, that we then have not consciousness of the muscular activity itself, any more than of the other senses acting, owing to the association required by the Initial Law of Consciousness not being effected.

But there are still more striking examples of how all the effects of the most elaborate attention can be got without consciousness of attending at all. A man in a reverie walking through crowded streets adapts his tread to all the inequalities of the road, diverges here-and-there to avoid obstacles, makes the right crossings and turns, and stops at the customary goal, without being aware of controlling the

activities which have carried him so exactly through it all.

In this case, a setting of the rate and order of the sense-machinery prospectively with a view to the elimination of one kind of sense-impressions only would not be enough. During the walk in the crowded thoroughfares, the man has had nearly all his senses brought into play to regulate his movements. A voice behind him must have caused him to bear to the right or left, the shadow of an approaching figure was the signal for his slackening, the slight contact of some one else's dress altered his steering. But all these interactions of cues, alternating from one sense to another, did not effectually hinder the inner-deriving neurotic diagram by means of which he was thinking as he stepped along unconsciously.

We have earlier stated the explanation alike of this case and of music-playing, reading, sleight-of-hand, etc.,—it is given in the association of the muscular activity with all the other senses, so that the merest *fragments* of any special sense-operation will serve interchangeably as prompting and regulating cues: what we are now pointing to is the astonishing intricacy of the momentary interchanges possible, and the nicety of disintegration required for preventing any of them from rising into consciousness.

§ 17. Pre-arrangements for Attending Possible.

The finishing touch of amazement in this respect is given by the power, which, though not common, seems to be undoubtedly possessed by some persons, of predetermining that after a certain lapse, that is, at a fixed hour, the impressions or activities shall so aggregate as to appear in consciousness. A man who has this ability of appointing beforehand the hour at which he will awake must arrange some of the groupings of central-molecules in a way of postponed readiness for a certain challenge, the groupings being left amenable to that challenge and to no others; the summons being given by impressions (keeping below consciousness until the time arrives), either in the form of his own intra-bodily activities, or of things making up the general scene about him. So soon as those periodical impressions arise, the grouping of reminiscent molecules so arranged must be started by them; the requisite rousing of consciousness will then take place. It is impossible for the man to explain how he comes to know so perfectly that activities, outer or inner, will be acting at that precise moment in that exact way, and how the pre-adjustment of the cerebral machinery is measured. But he is just able to tell you that a process of *rehearsal* takes place; he remembers and he imagines for the purpose. But on a smaller scale,

and with less striking effects, everybody uses the method.

We can all predetermine to remember a certain thing at a certain time, and when the period arrives, though the mind is occupied by other matters, the current diagram is disintegrated by the postponed activities coming into play on the challenge of the cues which the moment brings. We do not always succeed in achieving it, but if we fail, there are good reasons for it. Either we did not set the cerebral-sensory machinery rightly in the moment of rehearsal, or the combination then made has been decomposingly affected in the meantime by some powerfully-enforced use of the brain occurring since, or it happens that, when the calculated moment comes, the machinery is being used at a rate and on a scale in excess of anything expected to intervene, and the neurotic combination needed cannot take effect. In the latter case, exactly the same thing happens as when we have fixed to remember something when we come into a certain place, or pass a given spot, or do a certain act. We usually do remember it, but if the entering into the building, or the passing the spot, or doing the special act, happen to be associated with exciting circumstances which were not expected, we certainly shall not remember it. How could we hope to do so? The conditions are altered. But the process of a post-

ponable, periodical attention, with its wonderful possibilities, remains established as a fact.

§ 18. *Morbid Phenomena of Attention.*

There are some morbid phenomena connected with Attention in its extreme, irrational exercises. The production of *stigmata*, for example, must, according to the views stated in this chapter, be owing to the inner-deriving neurotic diagrams—under the strong excitation of intense long-sustained imaginings—sending full complex back-currents through fibrils related to the spots which are physically affected. Diseases induced by imagination can only have the same explanation: so must cures of ailments ideally effected. It is not hard to understand how belief, in this way, finds the means for performing physical alterations which may well seem almost miraculous.

§ 19. *Summary of the Results arrived at.*

Here we pause, glad of an opportunity for doing so, for the question of Attention is the most complicated one in all psychology. The operation of Attention in the moral realm yet remains to be considered; the proper place for that will be after Will and Conscience have been treated of.

Summing up the results of the inquiry into the phenomena of the first lower grade, it may be said that Attention is made necessary by the fact of our

cerebral apparatus being usable, in turn, for all our experience, and its consequently having to be kept in alternations of use partially adapted for all the changes of consciousness, impressional and reminiscent, that make up our life. To render it effective for any specific experience, a precise special adjustment of it is needed, corrected afresh at every instant, preventing the cues of other uses of it from interscindingly acting, and bringing into play the utmost number possible of those helpful to itself. Moral qualities, as we shall see later, develop out of the very mode and extent in which this is done; the cerebral limitations, which might be styled defects, in the intellectual meaning, being in fact the only conceivable opportunities for the arising of the human moral virtues.

In the chapter dealing with "The Intellect," a reference will be made to the process of attending introspectively, to which is given the name "Reflection."

But, proceeding step-by-step, we will next consider the Laws according to which Ideas succeed one another when Attention is normally acting, for there are general rules which enable prediction as to the order of ideas.

CHAPTER VII.

LAWS OF THE SUCCESSION OF IDEAS.

§ 1. *The Mutation of the Neurotic Diagram.*

THIS present chapter is the natural complement of the earlier one dealing with the question of Memory. The popular phrase, the Association of Ideas, means, according to the views here put forward, neither more-nor-less than the necessary permutation of the Neurotic Diagram giving its due results in consciousness.

Let us recall what was earlier said as to every idea beyond those of the simple sensations depending for its formative diagram upon a more-or-less elaborate specific grouping of the cerebral molecules. We saw that the inner gradually-accumulated activity was far in excess of any which an “object” could cause by the impressions it sensorially gives on any *single* occasion; the impressional-activities which we refer causatively to objects having, in fact, no possibility of associating themselves externally into our collective experience of the objects, this being alone possible within our apparatus. Already, therefore, in the cir-

cumstance of the activity enlarging itself interiorly, we get the explanation of the rudimentary process of being reminded of things by mere cues of them. But let us go back a moment.

It follows from the above views, that there is no other mode for a connectedly-acting consciousness, such as ours is, than that of permutation of the diagram by the propagatory activity of its own cues; Impression having its own proper power of over-efficacy in self-assertion whenever it operates massed sufficiently, and Attention having all the capacity of interference which we have in the last chapter seen that it has. Putting those interferences aside, the case stands thus:—

Every habituated-use of the neurotic-apparatus necessarily gives the potentiality of a reminiscence, the brain framing these potentialities,—owing to repair started in the act of use causing a preferential tendency to repetition of prior activity,—whenever the course of the executive-activity offers occasions. Consequently, as the diagram modifies from moment to moment, by and according to the cues of its own habitudes of use, reminiscence is unavoidable,—an idea, etc., flashing into consciousness at every *minimum* of effective change. What we are now asking for, are the general rules disclosed in this permutation of diagram,—that is, the laws (including in them those artificially framable by us in mnemonics, etc.) which such permutation observes.

§ 2. Rules of the Permutation.

The statements repeated in various forms by philosophers from Aristotle to Hume and Mill, affirm that these rules are describable as Contiguity, Resemblance, Contrast, with sub-laws of frequency, vividness, relations of cause-and-effect, etc. These are very valuable generalisations: it is, however, clear that they do not pass out of the empirical stage. They do not give any reasons for themselves, showing how they are necessary cases of causation. We submit the following as being the working-rules shown in the permutation:—

1. A peripherally-deriving sensory impression (as explained previously) always stirs cerebral activity beyond its own area if we have previously had a larger experience of the same kind in which the nerve-fibres now acting took part. It does so by virtue of the organised cues of the diagram coming into play. So soon as an impression or observation has proceeded (no matter how partial it then is) far enough to start the cues of a whole habituated use—that is, of an effective grouping of associated cerebral molecules—in the neurotic diagram, the reminiscence belonging to it begins to be suggested by the partial observation or impression, the peripheral activity being temporarily or finally super-

seded. But it may help the understanding of this point to give some details.

In proportion as a matter greatly interests us will a smaller-and-smaller cue start its recollection; for great interest means widely-ramifying co-ordinations with multiplicity of cross-cues. So, too, if we have been recently occupied with reference to any matter which has been left unfinished, or in connection with which anything else of interest has to be done, or can be done, a very small cue will serve. A number of co-ordinations were left in a state of pre-adjustment for that recollection, and they will re-frame the diagram upon slight prompting. It generally happens that the supersession of the peripheral activity is only very temporary, owing to the over-efficacy of Impression before explained enforcing itself; consciousness of the object actually present in that way reasserting itself instantly, or perhaps never quite fading out, in consequence of its massing the ratios of the peripherally-ending fibres. Thus, on my first getting a glimpse of a man, the mere set of his head, or the length of his limbs, or some peculiarity in a part of his dress, may instantly make me think of a friend of mine; but the figure of the man as it actually advances towards me, enforces its impressions, and I see that he is a stranger. If, however, the person of whom I was reminded for any reason greatly interests me in recollection at that moment,

I may practically lose sight of the stranger, though he is confronting me. In such a case the activity deriving from the inner cues, once set going, disables or supersedes the activity peripherally deriving.

2. If the suggested-experience, viz., the reminiscence arising under the above law, has, in its turn, cues running into a still larger whole, those cues occurring in an effective order, so as at one stage later to dominate the formative activity of the diagram, then this further whole, though it may have no direct connections with the first activity (that peripherally deriving), will be started,—the prior one going no further in constituting itself than the portion of cerebral area sufficient to give the cues of the third diagram, which will partially or wholly decompose the fragment of the second, originating in the first or peripheral activity. The third diagram may, in rotation, stir cues of a fourth, and so on through a lengthened series; portions of some of them possibly asserting themselves in a composite way, according as the general ideation progresses.

3. If two or more simultaneous impressions, ideas, etc., contain parts which stir the cues of a whole that is larger than either of themselves, they will be decomposed by the diagram started by the joint cues, though the cues of neither taken singly would have been sufficient to effect it.

4. In this way, in the event of the acting of a large conjunction of cues from a variety of impressions, a reminiscence may be started, or an imagination framed, of which the suggesting cues cannot ostensibly give any genealogical account; the parts acting as cues may, indeed, not have been separately perceptible at any time in consciousness. Further, the action of what may be called trivial cues must be well understood in order to explain much of our thinking. They make up the "situation," which can itself act as a cue, by virtue of the mere time-and-space relations of position. In this mode a merely temporary memory is given, by unrecognised cues acting so long as the situation remains unchanged, or this remembrance may revive on the situation being restored in the cases where that can be done. Send a young child across the room with a message, and it may deliver it rightly; if it has to go a yard out of the room, and the door is closed behind it, cutting off its surroundings at the moment it received the message, the child may not remember a word of it. Everybody so far perplexes and confuses some neurotic diagrams that he forgets things which he can only remember again on finding himself afresh on the spot where they happened, or in a place which resembles it.
5. In any train of sustained thinking, observing,

etc., inner parts of a compound-diagram will largely develope and progress, while the larger parts of it, giving what may be styled its general frame, are simply repeated in analogues, being sustained, as it were, in a stationary condition. Though the primary rule of the working of the neurotic diagram is necessarily that of accretive progress, the cues multiplying themselves, yet this is qualified by amount of energy, blood-supply, etc. Usually the diagram slowly changes the general pattern of it, fitfully adding to it, now here, now there, and relapsing several times; the cues of the general aspect of a matter and of the situation prelominating by their numerical bulk over special additions, which latter only slowly accumulate power of enforcing general change,—though these *may* change the pattern at once, and will do so instantly if they coincide among themselves sufficiently. But so long as the cues of the situation, even trivial ones, remain unchanged, there is a likelihood, that, on the first relaxation of Attention from any cause, they will enforce themselves afresh, analogues of the previous consciousness starting into play.

In spite of the general rule of accretion, there are cases in which the genus of an idea which forms part of a compound-diagram must suffer degradation: it must do so whenever the competitive-interaction of the cues, without wholly

decomposing it out of consciousness, robs it of parts of its associated activities. For there are critical moments in the propagation of a long-upheld diagram when the lower genus of cues, being most supported by the general trivial ones, last out longer than the finishing complexities, and reassert themselves destructively, unless the complexity has been carried far enough to change the main pattern. Any casual relaxation of Attention, from trivial challenge of the energy, etc., necessarily has the same effect. Also, when a diagram which has been long sustained in action has sunk below consciousness, a slight cue will re-evoke it, since it has really not ceased constituting itself from its analogues, and may only have sunk a very little below the range of the Law of Effectiveness, asking but small accretion to regain that range.

6. Owing to the fundamental fact of the cerebral activity of a reminiscent whole beginning so soon as the cues of it are effectually acting peripherally, an imperfect observation of an object (that is, a partial, unbalanced observation, attributable to the physical energy happening accidentally to slacken at the moment, or to weariness, to hurry, or to the presence of any disturbance in the media affecting the observation) may, accordingly as the cues fall in an effective order, suggest an object which has little or no resemblance to the suggesting one *fully*

considered. Difference of presentation of an object may make the cues work with a like surprising difference of result. So, too, if we have reminiscent cues of a higher genus of object, which agree with the impressional-activities of the full observation of a lower genus, the higher one will be suggested on the observation completing, though there may be great disparity in any entire comparison of the two objects.

7. In continuous thinking, there is accumulated a reverberatory stir of ideatory and emotional activity below the specifically cognised consciousness, cross-cues having been started in all directions. In this state, any effective impression or observation of a low genus of object—one consequently admitting of being used as a cue having much option—is liable to be enforced and supplemented by some of the reverberatory activities; a union of cues carrying the diagram too far in one direction, leading to mistake in a way differing from that named in the last paragraph. The consciousness set up may be agreeable or painful, as the case may be. A predisposing feeling, or mood, of this sort may decisively act in the initial stage of a ratiocinative experience, when the cues do not early combine into a perfectly logical diagram, and may so give a bias. In fact, this is what must happen in all cases where prejudiced conclusions are habitually maintained, being

preserved from correction,—the first aspect or mention of the particular subject challenges a general excitement which frames the predisposing mood. Again, at any time when the situation is one of a critical character, as when a man believes he is endangered, the low genus of diagram which the primary cues of the unclearly-defined position frame will, as the exaggerated prompting may happen to fall, exercise a power of selection in the case of the vague impressions or observations, massing them in some direction, and, owing to the apparatus when in a state of tension acting necessarily with rapidity and violence, using high analogues, it may cause great illusion. A frightened rustic will easily see a robber in a hedge-post. Stimulants may operate in this manner. The rule is, that the greater the accumulated or suddenly-aroused reverberatory stir,—that is, the higher the tension of the nervous apparatus,—the more excessive will be the mistake or the illusion, in proportion to the lowness of the genus of the impression or observation at the stage when it first becomes effective.

Much mistake of a slower, duller kind, such as that happening to adults in learning a new language, and to young children in all their acquirements, is owing to the greater part of a current impression agreeing with a prior diagram; what is

left remaining of the impression being really insignificant, having no cues beyond itself. In the early lessons in acquiring a new language, if the word read or heard agrees in many of its letters with one of the words already learnt, it will suggest that one, and may be mistaken for it. The only way of guarding against these risks is to frame, as a perpetual accompaniment of the diagrams, and, indeed, as forming part of all of them, a habit of ascertaining how far the impression is *exhausted* by Attention.

There is another curious little class of trifling mistakes,—the transposition of words in a sentence, either spoken or written, even the misplacing of letters in a word, or the omission of some link in a series of movements, etc. In such cases, the diagram has been jarred at some point, or over-hurried in one direction, or a portion of it has for some reason been prevented from taking effect, the rest going forward a stage notwithstanding. Instances are on record where violent shock, palsy, etc., have given more-or-less of permanency to these miscarriages. It is obvious that disease of the cerebral apparatus may so destroy or impair portions of its physical structure, that certain diagrams could never more be fulfilled. Such diseases there are, offering most curious facts of detail.

8. Impressions, observations, thoughts, very different from one another, may act as cues to the same diagram, it differing only to the extent in which such alternative cue forms part of it. For example, having learnt a new language, a word which has not in it a letter answering to the former known name will interchangeably serve as the verbal cue of an object. All that is needed is that the impression which is to act as the cue shall, as in the case of each and all of the other possible cues, be causatively mixed with the form of diagram to be recalled, so as to start it; this done, the order of the units in the cue-impression is not important.

9. From what has been said earlier, it follows that what is not in itself an effective cue may be a cue to that which is so. You may have to get the practical suggestion at several removes of the working of the diagram,—having to *wait* while the intermediate action goes forward, holding on by the fragment of a cue, and developing it progressively. A very slight difference, too, in the first order of presentation may largely alter the final fulfilment of the diagram. It is, consequently, a great advantage in sustained thinking that the impressions, etc., acting as cues, when once sufficient, should have as little enlargement or cross inter-associations as may be. This, as stated in a previous place, constitutes the advantage of reasoning by symbols,

when it can be done,—the propagation of the diagram being made direct and non-irrelevant.

10. If any *part* of a whole impression, which is effectively acting in consciousness, changes so as to become the cue of a reminiscent whole that is larger, or in any way more interesting, the other is suggested. A few days back, when facing a man in conversation, a sudden very slight dilation of his nostrils was enough instantly to remind me of a friend having a peculiarity in that respect, though my fellow-talker had not the least resemblance to that friend generally.

11. Part of an impression may have to decay before the reminiscent cue is effectively constituted. Thus, you may hear a sentence, which, for the moment, conveys no meaning, but slowly the sense develops: part of the impression—that which was merely trivial—rapidly decays in the absence of associatory cues, and falls out of the diagram; the remainder of the peripherally-deriving diagram then perfects the cue. A child in my presence heard a gentleman not very accurately pronounce a phrase in a foreign language she was learning. The puzzled look showed that for the first second the sounds conveyed no meaning; then the visage brightened with the remark, “You mean so-and-so.” There was enough of accurate sound in the pronunciation to act as a cue, so soon as the irre-

levant accents had faded sufficiently not to interfere; and they were necessarily the first to fade, not having associations.

12. You may fixedly set part of the situation-impressions, that is, those of your place and position at the moment, as suspensory cues, attaching to them, as it were, your ideation of a thing, while you go on divergingly to think out something else which has been suggested, returning when that is done with to the former train. You may use the Language-apparatus for that purpose, setting it to act in a certain way, but muscularly-postponing the activity, till something else has been done. When the impressions of the objects about you return into consciousness, they will bring back a diagram of some of the suspended prior thinking, or else, as the Language-faculty breaks into the postponed activity, you may suddenly find yourself speaking words or figures, which, for the instant, you do not remember having intended,—which may even surprise you; but, the next second, they act as cues which had been suspended.

13. The right occurring of habitual successions of ideas obviously pre-supposes that the physical states of the cerebral apparatus shall be the usual ones; answering, in fact, within small limits of variation, to those existing on previous occasions of the experience. Acceleration or retardation of blood-

supply, etc., may produce any degree of miscarriage in such expected successions. One of the ideas sought for and reckoned upon may come, and then others persistently refuse, as it were. Also, a temporary enlargement, from whatever cause, of the area of diagrams of low genus—interferences from bodily condition, beginnings of disease, reverberations of recent activities, the influence of artificial stimulants, ill-happening of cues—will give such diagrams power—in so far as they are not rectified by Attention bringing some of its controlling operations into play—to upset, to baffle, to displace, whenever they may be introduced, the higher, more compound thinkings. Much of the temptation which besfalls us comes in this way, giving the openings for moral discipline in aspiring as to the management of Attention.

14. All incoherent thinking in dreaming, delirium, etc., may be thus explained:—It is owing to the general progressive modification of the neurotic diagram as a whole, carried forward necessarily by the totalised control of all its intercrossed cues—(the result of this fine delicacy of sensitiveness, when it happens rightly, is what we call Reason or rationality)—being thrown away by the development and changes of some parts of it; these start into sudden disproportionate prominence owing to slumber or weakness, or wrong stimulation de-

ranging the natural consiliences, or from some preposterous enlargement of the low parts of the diagram, causing the absence of the higher, finer cross-cues,—absurdity reigning more-or-less completely. We do not in the worst cases perceive this at the time; but we may even have a faint suspicion of it in some of the not very extreme instances. (How in ratiocinative thinking the succession of ideas is virtually controlled by the practical requirements of the case in hand,—the diagram finally working out a result which we call rational,—is more fully set forth in the next chapter, that on “The Intellect.” It is owing to the part which the efferent nerves play in the diagram, as is there explained.)

15. In Language—including under the term not only the usual numerical and quantitative signs, but any contrivances by which the deaf-and-dumb and the blind may substitute language—we have the means by which we designedly modify the formation and propagation of the neurotic diagram. The details on this point were given in the chapter on Attention. We will only add here, that in nearly every diagram —unless it has the simplicity of technical symbols —there is some accidental preposterousness, which has to be corrected through Attention and the use of Language.

16. A diagram may progressively improve itself

by taking in the cues of the situation as furnishing a perception of its own success ; or it may perplex itself, nay, ruin itself, by an apprehension got from the currently-arising impressions of its own failure,—a blank arrest of thought being brought on in the very worst cases. An orator, an actor, etc., will grow more eloquent and effective if he sees that he carries his audience with him ; but should he quite fail to do so, his perceiving it may break him down utterly.

The general conclusion to which all the above laws point, is this,—That the neurotic diagram, by its automatic activities, works out the totality of its cues to the greatest accretion of stir, modified in the way of enlargement, retardation, etc., by Attention using, through volition, the Language-faculty and its other means.

§ 3. The Laws of Extent, Rapidity, and Convenience of Recall.

Three great practical generalisations can be made out. The first may be called that of Extent; the second that of Rapidity; the third, that of Convenience of Recall.

I. The rule giving the Extent of Final Result worked out by the diagram is this,—The lower, viz., the simpler, is the genus of the diagram at the first stage, providing that it be really compound, having

practical cues, the broader is the area of associations it stirs, and, therefore, the larger the number of potentialities it will tend to use up; so presenting a greater number of alternative ideas in exhausting the course of automatic activities challenged by the inter-crossing of the cues.

All the history of Scientific Discovery and of Invention in the Arts might be cited in proof of this rule. For instance,—taking a popular illustration,—Watt, in getting the notion for the construction of his steam engine, reduced his starting conception in thinking to this low genus,—motion by displacement through expansion giving pressure, repetition of that being got by alternate escape and supply of the expanding medium. The whole of the cases that might be given would only show that you cannot get from a diagram a greater ultimate procedure than the total *potentialities* of the cues it starts with.

II. The rule giving the Rapidity with which is reached the full activity of the diagram, that activity which exhausts the total potentiality of accretion as qualified by the operation of the former rule, is this,—The more intensely the suggesting impression or reminiscence acts within the limits of its first area, the more rapidly is the best instance of its kind constituted; since the best instance of the kind, by virtue of its being the best, used the whole of its

area intensely, and thus the packing of activity in the suggesting impression, etc., at such first stage is equivalent in the potentiality of its cues to the accumulation of cues *after* several stages in cases of weaker startings. An example may be of use, and a simple, even a grotesque one, may serve. I saw, a few days ago, in strong full light, a parrot with a huge wart upon its beak; the sight instantly, with scarcely any intermediate changes of diagram, reminded me of a man I know who has a wen on his face.

III. The rule of Convenience of Recall, giving the principle of all systems of Mnemonics, from the simple tying of the knot on the handkerchief, to the most elaborate methods, rests on the fact that you may indefinitely increase the trivial cues of a diagram, so long as they are kept the lowest of all in their power of enforcing their proper developments,—remaining trivial, that is, in reference to the main cue. In this enlargement of the area of the diagram by adding a great fringe of casual unintelligible activity, you, in proportion, multiply the cues of suggestion which can start the diagram you want to pre-secure.

§ 4. *The Real Significance of Contiguity, Resemblance, etc.*

It will now be easily understood how Contiguity, Resemblance, Contrast, etc., are sufficient descrip-

tions, though only empirical ones, of the ways in which ideas recur associatedly. Contiguity merely means that smaller diagrams have been over-lappingly included in a larger one of which they formed parts. If the sight of a particular walking-stick suggests to me the idea of its owner, it is because the figures of man and stick have previously formed a grouping. If I had always seen the man with the stick, to meet him without it would make me think of the stick, for there would be cross-cues connected with it and with his hand and lower extremities. But these are points which have been sufficiently illustrated over-and-over again long since. Resemblance implies that some parts (no matter how small) of the mutually-suggesting things have cues common to both; either the organ receiving the impression uses the same nerve-fibrils in some parts of its exercise, or there is inter-associated activity arising from some more ultimate diagram, connected with like and unlike, etc., to which the impressions appeal.

It should be noted, moreover, that Resemblance and Contiguity are always antagonistic. They are so because they represent different grades and methods of Attention. Resemblance necessarily arrests Contiguity, by the preclusive use it makes of the apparatus; the latter necessarily runs on when the other is not at work. Contrast, as a means of suggestion, may be explained by one or by both

together of the former principles: there are practical diagrams of surprise, admiration, mirth, dislike, etc., common always to extremes, and all ratiocinative diagrams acting in reference to the object must necessarily include cues to *both* cases. Associations operating by means of relations of cause-and-effect (that is, when they are not resolvable into cases of Contiguity) act through interconnections of ratiocinative diagrams. The working of frequency—which necessarily results in familiarity, and involves multiplication of trivial cues,—also the operation of vividness, recency, etc.—will be gathered from what has been said above. The merely temporary memory which recency can give is got from the addition of loose trivial cues, which are afterwards omitted, almost immediately, from the diagram.

§ 5. *Principle on which the Permutation proceeds.*

If the ultimate question now be put,—What is the principle upon which the permutation of the neurotic diagram proceeds?—the summarised answer is that the diagram, at every constitutive change, necessarily frames itself from its most intensely acting point; the result of which is that it hastens forward to the best reminiscent instance of its kind, since that has final relations with the greatest number of cues. It might, at first sight, appear that the succession of ideas proceeded on the principle of least alteration;

really, the principle is that of the greatest potentiality of accretion in the diagram through the cues for the next formation, by virtue of that implying the decomposition of what stands in its way.

The forms of Logic, enabling the criticising of the order of ideas, are, as before hinted, Rules of Attention for securing the right propagation and exhaustive working of the neurotic diagram. Their detailed consideration does not belong to this place. What next presses is rather a general statement of how the Intellectual Phenomena arise on this basis of a permutating neurotic-diagram controllable by Attention, which gets so much of its working power through Language.

CHAPTER VIII.

THE INTELLECT.

§ 1. *It is a Further Kind of Consciousness.*

THE Intellect stands for a further different kind of experience besides that we have hitherto mainly dealt with, viz., Sensation,—a kind which can multiply itself by means of its own process, and which, in its practical results when aided by volition, leads to a large control of the sensory experience. It is indispensable that its process shall be inquired into before anything is attempted to be said in detail of the Emotions, for those higher experiences greatly depend upon the intellectual awareness occurring. By it we understand our own activity as such, connecting our efferent movements with the sensory changes they work, and, through modifications of sensory impression coming, as we will explain directly, to be intellectually apprehendable as signs of measurement of the acting of the cosmical executive-energy, we are enabled to adapt and use our own activity systematically, voluntarily operating upon causation. Thus, our whole

experience is altered by this new sort of consciousness being added. Obtaining intellectual *Conceptions*, not only do we thenceforward have sensory consciousness, but we become critically aware of our sensations in another way, namely, that of relations of comparison among themselves, and, also, of a forecasting of the working of causation in respect of their happening,—the latter empowering us, besides experiencing the things which are present, to anticipate by imagination events yet to come, calculable in consequence of the natural operations and changes of the present things, and of our own volitional activity interfering with them. Out of the addition to Memory of this power, as has just been said, the higher Emotions come.

§ 2. *How this Critical Experience arises.*

Let us first consider the critical, comparing, measuring function which is the very basis on which the intellectual phenomena arise. How does this power of criticising sensory experience, in addition to having the sensations, come about? It is not difficult to see how what we may call the *occasion* for the primary exercise of comparison offers.

In dealing with the questions of "Memory," "The Neurotic Diagram," etc., it was made out that on any *repetition* of a peripherally-arising sensory experience, the very first stage of it prompts the

reminiscent-activity adapted for its conditioning to the extent in which that has been organised, and that this inner-deriving neurotic diagram, owing to its using the short wholly-cerebral routes, necessarily runs on a little in advance of the peripheral impression, though the latter may be able to decompose the reminiscence a stage later by virtue of the overriding efficacy of Impression, through its massing all the ratios of the area in which it effectively acts, starting cross-cues which debar the continued use of the cerebral apparatus reminiscently. But just at the point of the intermixing of the impressional and reminiscent activities, there is a duplicity of consciousness—got from the two diagrams competitively contending—in which the Ego, by a capability of complicating its own experience (a point to which we shall have to recur again), gets the phenomenon of comparison,—being in a position to appreciate a difference, and to say, “This present experience is larger or smaller, longer or shorter, sweeter or sourer, colder or hotter, weaker, more intense, etc., than the former one of the kind was.” Here, then, we come upon the germ of the intellectual process,—it is got from reminiscence at the first prompting of impression starting a little ahead of it, and being a moment later overtaken by it.

But out of this germinal power a much larger faculty develops. The matured Intellect is not only

able to pronounce that this experience is intenser or weaker, larger or smaller, longer or shorter, and so on: by means of a positive developement of its own style of experience, it goes on to a precise comparative judgment of how much one thing differs or agrees with another in these respects. It, in a word, obtains objects for itself out of its own process (in a way explained in § 4 below), and framing the *conceptions* of number, size, etc., applies those to all individual cases, trying the relations of comparison between things by these abstract notions got from an activity which in some way enters into the conditioning of the egoistic actualisation, giving an experience which is additional to that of the first merely individual impressions objects make. The problem to be solved is,—how is this further additional style of experience, *i.e.*, that of the intellectual consciousness, executively-conditioned? These apprehensions of “relation,” which have to be assigned, not to things as part of their own individual contents, but rather as it were being assignable *between* them, how are they framed and sustained? It will be a help, however, to speak first of Perception.

§ 3. *The Distinction between Sensation and Perception.*

It may have occurred to the mind of the reader, that, in what has been said hitherto, no very specific mention has been made of *Perception*. The distinction

between it and Sensation is put into great prominence by some of our best-known writers. Among the very first phenomena of the intellectual experience they have classed the *perceiving* of “objects” by the help of a judgment founding on memory, so cognising a power in objects of affording, in accordance with practical alteration of the situation, sensations in excess of the present impression;—in that way elaborating in detail the belief of externality, etc.

That there is a very real distinction in our experience marked by introducing the term Perception is certain. But, according to the views attempted to be set forth in the earlier chapters, it requires that the statement of that distinction should be re-adapted somewhat. If our consciousness is always conditioned in the way previously described by an intra-bodily framed neurotic diagram, progressively organised by cumulation of reminiscent activity, all our possible sensory experience is potentially contained in the diagram at the moment of perceiving, so far as the limiting power of Attention is not restrictively operating,—barring, indeed, the overriding efficacy of Impression through its massing of ratios in any sense-organ or organs if the executive-conditioning enforces that; and whenever we are perceiving, this is being done in at least one special sense.

This conclusion is inevitable from all the preceding reasoning. Still, it does not seem to account

fully for the distinction there is between Sensation and Perception. Nor does it account for it; it is only half of the explanation. Just as sensation in the case of executive massing of impression intensifies the experience in the sensory modes accordingly as the peripheral activity gives such massing in its operation, so in perception there is all the difference of the additional experience associated at that moment by the intellectual faculty. The distinction between Sensation and Perception is not merely that made by the presence or the absence of massed-impression, but the difference given by that and the presence or absence, likewise, of an application of the intellectual conceptions to the unmassed sensory experience furnished by the diagram then current;—with this further fact to be borne in mind, that, in the very nature of the case, when massed-impression operates these intellectual conceptions abate or vanish in proportion, not having been organised in respect of extreme cases.

But even this statement does not fully do justice to the distinction. The general effect, as one may term it, of the application of the Intellectual Conceptions is to give an apprehension of executive-potentiality in objects. The definition put forward by Mr. John Stuart Mill, affirming that Matter was a grouping of all the possibilities of sensation, was a fine generalisation, but it did not quite cover the case. It left out this important item,—that, by the

intellectual function, we apprehend an executive-potentiality in Matter which is additional to all its sensory modes, and by virtue of which objects mutually affect each other, altering—in ways which are ascertainable and calculable—the subsequent order of the sensations we experience in respect of them.

This final apprehension on the part of the Intellect comes into play in enlarging the difference between Sensation and Perception, and must be taken into the estimate in accounting for the difference between them. In cases of “perceiving” an object,—that is, of having in the neurotic-diagram reminiscent sensory activity in other modes besides the one or more kinds in which massed-impression is operating,—we not only add the intellectual experiences of the relations of comparison, thinking the object in the categories of number, size, position, etc., but we apprehend its executive-potentiality. How this apprehension of causation arises is the question needing to be followed further into detail. Let us restate the point in its simplest form.

§ 4. How is the Intellectual Consciousness Conditioned?

How is this consciousness, which is additional to that of sensation, and observatory of the happening of the sensory experience, chronologically conditioned?

Earlier, it was made out that certain volumes, rapidities, directions, etc., of motion in the sensory-

cerebral system condition the specific sensations, light, sound, etc., cognised by the Ego, which, on its part, is chronologically conditioned by a compound movement in central-molecules,—that agitation being prompted by the junction there of converging sensory volumes, rapidities, etc., the fibril and central cell movements forming a systematisation, being unified; so that the sensation only exists in being cognised by the Ego, and the Ego becomes self-aware only in the act of cognising sensation in some manner.

Is there in our organisation any other motion than the above, distinguishable either in the way of further quantity, or as differing in specialisation of mode? •There is,—a motion of large extent, and one which in its mode is wholly different in some respects from the others, though connectable with them. It is the **EFFERENT ACTIVITY**. All the facts go to show that it is from that part of this activity which is volitional that the intellectual phenomena chronologically derive, being strictly quantified by it. In its very origin this motion is related to the central-molecules, and, through them, has association with the peripherally-impressible fibres, so completing the system of conditioning and quantifying motion. For we only use the efferent activity in consequence of the promptings of sensory impression arousing the egoistic molecules; and the use of it, by bringing us bodily into altered practical rela-

tions with things, leads to sensation afresh; thus, as we have said, completing the circle.

But a further preliminary word is needed here. Has the Ego any cognition of the operations of the efferent activity itself, distinct from the changes worked executively in the order of previously recognised sensations upon certain volitions arising in us? It is now agreed that the efferent activity itself gives a specific experience, which has been named the Muscular Sensation; though it is clear, let us repeat, that we can only know of the physical effectiveness connected with it by the muscular activity working changes in the known *order* of the occurring of the other sensations. In the preceding chapters it has been attempted to be shown that the constitutive-dynamics of the cerebral movement which chronologically conditions human consciousness, require that a locomotory activity shall occur in association with the play of any and all of the other senses in actualising the Ego. If that be so, anybody will at once see that the volitional efferent apparatus is naturally the machinery of the Intellect, if its activity in working modifications in the other sensations with which it is so associated can be made by us the standard of measurement of the operations of the general cosmical energy in its giving the physical occasions of the sensations. But it is necessary to go more into detail.

§ 5. *The Evidence.*

In turning back to the question of the evidence, we may say, first of all, that a general presumption is afforded of there being this chronological association between the intellectual experience and the efferent activity, by the fact that we never can have that experience without sustained attention. In treating of Attention, we saw that, even in its most rudimentary stage, an aggregating use of the muscular machinery is needed. Now a fresh advantage in that provision discloses itself. By means of it the Intellect is enabled to take note of all our experience. Everybody knows that the Intellect ceases to give any consciousness—that is, we fail to have any sentiency in that peculiar style—the instant that a kind of effort needed for its exercise ceases. It does so, as we now affirm, because the efferent motion must be currently happening,—occurring, that is, at the cerebral endings of the nerve fibrils, or, in all the more elaborate cases, prompting the Language-faculty,—in order to sustain that style of consciousness; this, however, always taking place when the Ego is *fully* actualised, the central-molecules then necessarily, more-or-less, working their efferent fibres.

But we may go beyond this stage. Putting the matter broadly, it is clear that not one of the ideas

of relation (the categories of number, size, etc.), nor the fundamental *conceptions* of substance, cause, etc., making up our intellectual experience, could ever be *exemplified* without a use of the organic apparatus of so complex a nature that it asks a co-ordination of adjustments which is only possible by bringing the efferent nerves into play by means of volitions. Let us take the ideas of number, position, etc..

It is obvious that, in order for us to gain those experiences, we must have one sensation the characteristic of which is its being prolongable and cumulatory, having the capability of adjusting itself, so to speak, so as to be persistable enough and spacious enough to include the cessation and re-beginning of the other specific sensations; its own experience between-while becoming, in the cognition of the Ego, allottable *representatively* for the inscrutable operation of the executive-process of the cosmical energy in giving the occasions of the other sensations. It is easy to see that the volitional-activity in the operation of the efferent machinery can alone afford this possibility of associating the other sensations,—number, position, etc., being really names for its efforts in operating; the other sensations, however, by having, apart from its interferences, a settled order in the executive process, verifying, in their turn, the efforts, and so appropriating the terms.

Every one of these intellectual conceptions, we

repeat, is plainly something added to the other experiences by an egoistically-arising operation; the ideas of relation between objects or occasions are, in fact, a classification which the Intellect imposes on them in respect of ourselves. The process may be made out clearly, though in stating it we have to use the completed technology of the Intellect beforehand. Man is a creature having separate sense-organs, acting by minute adjustments, each sense operating in a small, strictly-localised field, with a general bodily frame in which those organs are set, capable, by its larger activity, of controlling the special organs,—in that way cutting short their contact with things, and again restoring the impressional-contact. It must not be forgotten, moreover, that our volitions are not all of the optional, affirmative kind. Sensory objects present themselves to us in modes and orders that we do not wish, and we can then only escape them by a complicated adjustment of the bodily machinery,—more than one danger may impend at the same moment, and have simultaneously to be avoided. In early life—that is, during infancy and early juvenility—there is a good deal of this enforced sharpening of the wits.

Thus, our volitional movements have to get their prompting from, and to adapt themselves to, the executive-order of the world, according to which one thing has practical relations with another, mutual

changes being worked in them to the happening of which our efferent activity must adjust itself; though having done so, it obtains considerable power over the practical relations by optionally using them. Thus number, position, etc., come to have a real significance of some kind in the arrangements of the world, though their availability only holds good for man, or for a creature like him.

How we are helped in other ways to a free activity of the Intellect,—its Conceptions being left applicable even hypothetically,—will be spoken of in a later passage. Anything that could be said as to the idea of number, of course applies to the idea of position; number, in the way of its own distinguishing concretely, necessarily involving the relation of position. Size, intensity, duration, etc., do not require separate explanations,—the ideas arise in the same way. The terms are names for the modes in which the efferent activity adjusts itself in associating the sensations occasioned by the objects, or executive-operations, of the world in which we find ourselves. That these intellectual conceptions should, so far as the nature of the case may give them range, be of common application to all the sensory experiences, irrespective of organ, is obvious enough, since, as we have seen, the muscular-machinery has to act in association with each organ.

§ 6. *Man's Efferent Activity comes to represent the Cosmical Executive-Operation.*

Let us return to the point upon which all practically hinges, which is this,—that the experiences man gets from his executive activity, being themselves conditioned by the actual happening of the causation of things prompting, operating upon, and enabling his efferent doings, the latter having no other occasioning origin,—they are necessarily capable of being, in turn, *representative hypothetically of the acting of that causation itself*, and are, in fact, so used. The small *intra-bodily* executive system, in a word, comes to stand, more-or-less adequately, for the large cosmical one.

It might be put so concisely as to say, that all our intellectual experience arises from the seemingly small circumstance that we can have no act of consciousness without an aggregating use of the bodily machinery, requiring an exercise of Attention, or, if impressions attack us, they use the frame in an equivalent way; in either case, there is associated a feeling of activity in our frame in response to every effective operation of things upon us, and the counting, measuring, etc., in the former stands for the latter. This is the great stroke of skill, so to put it, in the framing of the Intellect.

If we were to go into full detail, we should find

that in the case of every idea of relation of physical objects a *practical consequence* is involved, which could only be made cognisable to us through the locomotive, the muscular machinery. If, ascending higher, we take such correlative ideas as inner and outer, north and south, father and son, individual and the State, it will still be seen that they imply consequential results,—they affect procedure. The whole class of *negative* notions, which play so great a part in our mental life, and which the special senses cannot give us in any way, are framed representatively from the activity of the executive, the practical faculty, for they really affect our *doing*. If we go as far back as possible, the purely mental conception of Substance stands for neither more-nor-less than the practical consequences which arise out of the reality and operation of Energy. In saying that the qualities of matter are extension, impenetrability, etc., we are simply saying that certain things cannot be done by us; certain space is occupied,—that is, if we try to fill it, we find it not available; resistance is offered, and so on. Add to this, that, by the same rules, we get to know what *can* be done by availing ourselves of these limitations, and you have the whole function of the Intellect. It has to do with doing, with happening,—the causal activity of Nature and of ourself; and it can deal with nothing else. But this

is saying that in reference to it we are always remitted to the efferent machinery for intelligibility; this being got by using our own associated expenditure of energy as counters, enabling us to calculate and to measure the doings of the general causation.

§ 7. *Practical Interchangeability of Passive Impressions
and Efferent Activities.*

But here we must recall a remark made at the beginning of the chapter, as to the way in which the modifications of size, vividness, etc., in recurring-impressions by the altered mode in which they appeal to the efferent machinery, come to be signs of the working of general causation, and are, in turn, useable for reckoning it.

Earlier we said, that our own executive-activity, by placing us in altered relations to things, can lead to sensation occurring afresh and differently. Our volitions give their own special experience in and of themselves; but they are only verified to us as being physically effective by sensory impressions happening in a different order in consequence of the activities: it is only in that way we can recognise the volitions as practical. But this is not the whole of the matter. Our sense-organs being set in a frame, every shifting of which shifts them, our own locomotory-activity produces certain effects in the

way of modifying the intensity, size, etc., of impressions; but just the same effects are produced by locomotion in the impressing objects themselves. A colour or a sound weakens, or a figure diminishes in apparent size, in exactly the same manner whether we retreat from the object fifty yards or it is withdrawn from us that distance, we ourselves remaining stationary. Thus the Intellect gets its materials from what, by contrast, may be called passivity on our part, as well as from our activity, though we have in the former case to act to the extent of attending.

It is by means of a most subtle acceptance of this *interchangeability* of differently-produced effects, together with making modifications of impression of one sense qualify modifications of it in another sense, and both jointly qualify a third, and so on, that the Intellect obtains its great scope.

For instance, if I see a figure which, from its general contour, I know to be that of a man, but the details of which are not fully discernible, I become aware—if it is proved that my vision is acting rightly by some other objects showing with perfect distinctness—that the figure is separated from me by distance, that is, either it or I should have to take a number of strides to bring us near; I know this, for the same effect has been produced before by my withdrawing from a man. This is a mere inter-

changeability of effect, and it can be carried to great exactness. I may be able, by a rapid induction founded upon the general application of the above principle to the whole situation at the moment, to say about how far away the figure is, what its real height is, its breadth, etc. In turn, I may use it in the way of comparison to measure other objects adjacent to the man, or between him and me, or beyond him. Further, if by the same method I perceive that the atmosphere at the time is misty, I shall be able, though very likely with much less accuracy, to make allowances for that modification in estimating the distance, etc., or, if the air should be unusually clear, I should take that into account. If instead of seeing the man, another sense was appealed to, and I heard him speak or shout, I should by the modifications of that impression, allowing for the blowing of the wind, the mixture of other noises, etc., be able to say the direction of the quarter where the man was, and something of the distance; especially if the voice was one with whose strength I was familiar, and if I, also, was acquainted with the position of objects near us which could interfere with the sound.

Still more intricate illustrations might be given. But multiply the examples how you will, you are yet dealing with practical consequences,—the efferent activity developing an additional side to the neurotic

diagram, answering to those requirements; with this most striking circumstance to be specially noted, that the modifications of impression being capable of serving as signs of those calculations of practical requirement, the Ego can find in those modified impressional-signs equivalents of the full efferent activities giving the intellectual conceptions.

It is a part of the subject to be pushed as far in the inquiry as we can possibly carry it.

§ 8. *Use of the Language-Faculty.*

The question naturally suggests itself,—How far is the efferent activity needed for the conditioning of the intellectual experience *explicit* in its operation? It is impossible that it can be so wholly in any but the very simplest cases, and yet it is made out that for every application—hypothetical as well as practical—of the intellectual conceptions there must be at least a germinal representative operation of the efferent activity. We shall see in a moment, when speaking in the next section still more in detail of the “Helps of the Intellectual Process,” how very rudimentarily-representative an operation is made practically to serve the purpose. But, in the first instance, let us here point out that the primary great stroke of economy is effected by the interpolation, so to speak, of the Language-faculty into the efferent system. By this simple addition of

a *supplementary* minor muscular apparatus capable of representing by an impression-furnishing movement of its own every one of the efferent operations of the larger, practically-executive apparatus of our bodily frame, and able—by dealing only with the *names* of objects in lieu of the objects themselves—to be volitionally worked to far higher degrees of complexity and fineness in applying the intellectual conceptions, does the Intellect get its last surprising reach of range. How enormously the non-including in the scheme of our organisation of this duplicatory, more subtle, minor efferent-system would have narrowed human mental possibilities is shown in the cases of the unhappy deaf-mutes who remain untrained by those who have the Language-faculty.

Moreover, this is the place to recall a remark made in an earlier chapter as to the possibility of fibres in neurotic diagrams being made to act together in the inner-arising activities, though they had never done so in the peripherally-enforced diagram. This is easily made feasible by means of the Language-faculty, and is, in fact, the explanation of much that we name Imagination.

But another observation has to be added. If the Language-faculty is capable of this very intricate activity, its operations have all to be cerebrally-prompted. It is there that have to be organised by interconnections going to-and-fro between the sensory

organs—to the limits of the complexity the individual brain affords—the intricate conditioning prompting-movements. This makes it easy to understand the necessity for the brain to be so large an organ,—comprising so much of apparatus besides the special sense organs; and, also, why the disabling effects of certain lesions in the general cerebral structure give specific defect in the intellectual sentiency,—there being, as Professor Ferrier and others have shown, a possibility of approximately localising such specific disablements.

Finally, as we saw when dealing in a general way with "Attention," there are still further mitigations of the stress of using the language-resource provided.

§ 9. Minimising Helps of the Intellectual Process.

Although for full, perfect intellection in reference to a thing,—that is, for the complete realisation of all the practical consequences involved in and by it,—the efferent machinery must work largely at its cerebral endings, to the extent, at least, of using the Language-faculty, yet for ordinary purposes, we repeat, there are large reliefs of this necessity. Not only are there the artifices, before mentioned, of the algebraic notation, etc., but a good deal of the efferent activity comes to be habitually relegated to the reflex nervous centres, not being kept cerebral at all; we only know of its operations by the way in

which it affects us through the specific sensations got from the muscles and the peripherally-impressible nerves. A substitution for the real intellectual effort is so made possible. In very many matters of what seem to be arithmetical and mathematical calculation,—but in which the intermediate computations are not really worked out at all in any consciously definite way,—the operation is one of this rudimentary character, with very little stir of efferent activity or intellectual consciousness; scarcely any use being made in detail of the conceptions of number, position, etc., excepting to verify the conclusions for an instant when arrived at.

Indeed, it is possible to go yet further. The Ego can nearly dispense even with the reduced sensory representative signs, and, by substituting them by its own actualisations in primary consciousness, still get the *equivalents* of the required results from a dark interaction of its own; the mere bare first unit of the expenditure of energy in the frame being sufficient as a counter to reckon with. So that what seem to be most intellectual results in the way of computation, etc., can be got without the full intellectual consciousness really acting at all. Within narrow, dim limits, but which still are sufficient for a good many practical occasions, the egoistic experience is itself sufficiently representative in a vague way. We can usually guess lapse of time approximately by falling

back upon mere feeling. Speaking more generally, we may say that the Intellect, like the Imagination, may be worked at almost all degrees of power; and, for the economising of effort, we often use both as low as possible. The neurotic diagram is made to include just enough of sensation,—that is, activity of the peripherally-impressible nerves,—and just enough of intellection,—that is, activity of the efferent nerves,—to give us notions which serve ordinary practical purposes. The intellectual conceptions, like the forms of the imagination, are, in fact, only *fully* brought forth for use occasionally.

§ 10. *Logic, Induction, Deduction, etc..*

It is not within the plan of these pages to speak in detail of Logic. At the close of the last chapter it was stated that the logical formulæ are really rules of Attention, their object being to secure the right propagation and exhaustive working of the neurotic diagram. The syllogistic forms are the modes of that working when made to be more than ordinarily explicit. One observation however must be added as to the distinction between Induction and Deduction: in cases of induction the neurotic diagram is left open to enlarge its formative plan; in deduction it is closed, and made to work out its contents on the already subsisting reminiscent basis.

The process of *Reflection* has been made of great

importance in the systems of some thinkers, notably so in that of Locke. It is very clear that a second, and what may be called an interior, set of occasions or objects of consciousness is got by a supplementary introverted act of Attention, fixing the egoistic regard on our experiences in themselves, independently as it were of their primary objective conditioning. But it does not seem necessary to consider this as showing a further, different special act of the Intellect. The question at bottom really is how far interiorly the distinction of egoistic and non-egoistic in our experience extends when Attention traces that distinction to its full limit. It is a point to which we shall have again to refer in considering the Ego. As was mentioned in the chapter on Attention, the same working rules in the management of our attention are exemplified in reflecting as in observing, when the contemplation has retreated to this inner position.

What is the mode of *Abstraction*—the forming conceptions of qualities—will have been already gathered: it consists in Attention abating sensory-associations numerically to the *minimum*,—the related efferent activity being then so merely general as to be freely hypothetical. All that is practically involved in the attribute of whiteness,—that is, of white completely generalised,—is in so far applicable to all white objects. In every case of metaphorical, *i.e.*

poetical, ethical, religious use of an abstract generalisation of a quality, there is possibility of large egoistic actualisation from the high numerical integration of reminiscent cases, though prior to the re-enlargement of sentience given in such generalised application there is abatement of emotional experience in every instance of Abstraction.

§ 11. Ultimate Glimpse of the Cerebral Mode of the Intellectual Phenomena.

Let us now, finally, re-state the cerebral mode of the Intellectual Phenomena.

If we regard the intellectual conceptions in a physiological aspect,—that is, as conditioned by the neurotic diagram,—we see that they mean certain activities of the efferent machinery; those answering to the requirements of the practical causation operating in things. But, as in the case of the sensory experience and general egoistic consciousness before inquired into, so here as to the intellectual experience, we must try to go one stage further in tracking the conditioning process. To say simply that the intellectual phenomena connect chronologically with the efferent activity, is but coupling them with a kind of motion which is only saved from being motion-in-general by having the one specific quality of being determined outwardly, instead of inwardly, in its propagation. That does not seem to give

enough of speciality to be adequate for the case. In fact, something further can be discerned. The specific characteristic of the efferent activity is a connected-relatedness of movement, giving what we call *tension*, which necessarily implies certain inter-adjustments statically and dynamically. Just as precise volumes, rapidities, etc., must appear in the motion with which the sensations and their modifications chronologically connect, so must the efferent activity, to condition the intellectual experience, develop specific tensions, by interadjustments muscularly systematised; a precise assignment of degree, grouping, etc., being indicated, answering to the diversity of the conceptions of number, of size, etc., though we may not be able in every case to give the assignment particularly.

This, however, can clearly be made out,—that the muscular activity carries forward its dynamical sum-total from stage to stage; so that the existing degree of contraction representatively stands for all the efforts which have progressively led to it, and in the relaxation of the muscle the history of the contraction will be exactly repeated in inverse order. This is the only glimmer of light which can be got as to how the existing stage of the muscular activity gives more experience than seems to belong to the present instant, for all these ideas of relation, number, size, etc., include a reference to *past*

experience. That is of the very nature of the intellectual phenomena. All the explanation that can be gained of the conditioning process, we repeat, lies in the fact of the muscular activity carrying forward, in a cumulatory sum-total, all the effort leading to the existing tension: thus a certain state of the muscular apparatus of any of the senses conditions the idea of number, position, etc., since it will in a relaxation of the tension unfold the practical consequences which number, position, etc., stand for. The arc representatively gives the circle.

Is it possible to accept this explanation as being full and complete? A conclusion naturally offers itself,—as we found it did in considering the phenomena of Memory proper,—that an egoistic complication is involved in this unifying of experience, which complication is a phenomenon somehow in excess of the current cerebral actualisation of the Ego. It is a very subtle point, and a return to it will be necessary later. As to the fact of the intellectual process somehow involving interpenetration and duplication of consciousness,—the present case always referring to some other in a way of comparison, contrast, etc.,—there can be no doubt whatever. Take, for instance, the great generalisations which Professor Bain lays down as the fundamental principles of the intellectual process,—Discrimination and Similarity; they plainly imply this inter-reference, this complication

and retrospective range in the ultimate egoistic experience. Indeed, the recently-formulated doctrine of *Relativity*, that is, the affirmation of *change* of nervous state being needed for consciousness in any and all of its modes, is based on the same fact. But this really remits the final explanation of all experience to a certain unifying-function somehow fulfilled within the egoistic actualisation itself;—the nearest approach to an intelligible exemplification of which is that hinted at by the circumstance of muscular-tensions carrying forward in themselves a record of their own constituting. There seems no possibility of pushing the explanation further without bringing in the aid of a fresh assumption.

In saying this now and here, we are purposely keeping the question open for separate consideration, in the later chapter dealing with the topic: “Is there evidence of another Entity besides Matter?”

§ 12. *A Free Hypothetical Activity Possible.*

There can, however, be no difficulty in understanding how the Intellectual Conceptions are available for hypothetical use. Our volitions being prompted by motives, can, without reference to particular cases, rehearse the activities giving the conceptions of number, position, etc., at any time; stopping short of actually applying them to a real concrete case,—the activities in this checked way being hypothetical.

If there be no such checking, and the activity be urged to the full limit, the conceptions will take on special objective illustrations; for, as we have seen, it is the natural course of the efferent activities to be prompted by the egoistic actualisation and to verify themselves by leading to fresh impressional experience, which the Language-faculty can give by means of names. But, in the modes we have stated, the Intellect has a free theoretical activity. It is possible for us to think of the number one, or of any number, and of all kinds of positional arrangements, without being compelled fully to imagine a concrete thing, or the answering number of things, or to give definite form and full colour to objects in positional arrangements. The Ego, as pointed out above, can make its own actualising-activities serve the purpose. By the manipulation of a few figures and algebraic characters, the operations of the interstellar causation can be worked out as they show in suns and stars and satellites. Of course, that is an extreme illustration.

§ 13. *Verification.*

It scarcely needs repeating, that the use of the Intellectual Conceptions has no real significance excepting in so far as observation ascertains, by application of them concretely, the actual course of causation. Impressional-experience must first teach

us how matter shows gravity and resistance; how things on approaching within certain limits develope physical effects, electricity, etc.; how, on substances being mixed in definite proportions, on being saturated, heated, etc., chemical changes result; how, on due conditions being observed, vital effects present themselves. We could not collect these facts as we know them without the aid of the Intellectual Conceptions which develope themselves in the process; the notions of number, position, intensity, etc., giving to causation such intelligibility of manner as it has for us; and the facts once known, we can by means of those Conceptions thenceforward calculate matters backwards-and-forwards, so far as the facts remain like or can be compared analogically: but we have to learn the facts themselves as events of causation, and for this there must, in all cases but the simplest, be verification by means of analysis and synthesis.

§ 14. The Higher Operations of the Judgment.

It would be quite useless to attempt here any exposition of the mode in which the activity of the efferent machinery can support such subtly-elaborate judgments as we make respecting persons, conduct, æsthetics, religious doctrines, etc. It has again to be said that the physical activity at a certain stage takes on a metaphorical style; such lights as can be thrown upon these higher forms of

intellectual consciousness will offer themselves when dealing with Conduct, Æsthetics, etc. On the general subject of the occasions afforded to the Intellect some further remarks will be found in the chapter on "Evil."

In an earlier place it was observed that the Reason, in its physiological-cerebral aspect, means a certain organised habitude and pre-arrangement for simultaneous activity of inter-communicating central molecules challenging the fibrils; it will, from what has been put forward in this chapter, now be better understood how largely this challenge has reference to the efferent fibrils. It is they which give, as was before mentioned, what we call rationality, being the only part of our experience *which carries a totalisation of itself forward from moment to moment*. This explains how it is that absurdity can so reign in dreams. Energy is then so slack that the efferent nerves are not effectively challenged, and practical consequences go for nothing. The preposterousness of the ideation of idiots is referable to the efferent activity never having been fully organised in their cases. The temporary silliness of thought under the influence of intoxicating stimulants, and also of some anaesthetics in the first stage of operation, comes about in the same way; the efferent nerves are prevented from properly acting in the neurotic diagram.

§ 15. The Intellect and Emotion.

At the opening of this inquiry, it was mentioned that a sensation in itself—apart from some modification of it compared with other instances, or its occurring grouped in specific order with other sensations, the executive value of such grouping having been intellectually ascertained, so serving as a sign of the working of causation—offers no elements at all for thinking. Thought and sensation have nothing directly in common. A specific sensation fulfils itself in our current experience of it, and there is nothing more to be done or said as to it in itself. Look, then, at the enlargement of consciousness which follows from the development of Intellect! By means of it we can think in respect of the happening of the sensation in quite a number of modes, getting experience which is not included in the sensation's own style of consciousness. We can think of it as an occurrence,—as being one, or as belonging to a series : we can think of it as larger or smaller, briefer in duration or more prolonged, more or less intense, more effective in special ways than other instances, and as nearer, further off, above, below, etc. How it has come about as an event can be matter of inquiry; when it will change, or end, as intimated by the signs of its own progressive modification and its related intercalation among other sensations, and what it will be followed

by, can alike be calculated, if the facts needed for making the judgments have been collected by observation and verified. All this in addition to the apprehending of our own incidental activity, with the power in countless ways of self-regulating that activity so as to govern causation. On this basis of the intellectual apprehensions, as before hinted, emotions of gladness, displeasure, hope, fear, etc., arise accordingly; their doing so being so many more added materials for thought in reference to the same occasion. In these ways, owing to man's developing Intellect, every sensation is made to give in connection with itself what may be called non-sensory consciousness of many times over its own extent and value.

But the point which rather needs re-mention here is the fact, that though by our apprehending of the working of causation, with the power of forecasting its results, the Emotions arise, yet the intellectual process itself at the primary stage of it prevents emotional sentiency. As to this fact, Sir William Hamilton, as before stated, must be held to be quite right. The explanation was hinted at in an earlier passage. It is owing, first, to our abating as far as may be the sensory-connections of the Ego-actualising molecules, and, second, to the energy discharged by the cerebral reaction in those molecules going in a scattered way to prompt the general cerebralisa-

tion needed for the intellectual sentiency, using the Language-faculty for that purpose. Our experience, however, shows that at subsequent stages when the analytical process completes and higher reintegrations occur in the brain, superior emotions flash forth,—the Intellectual Feelings. The Conscience even takes note of them, and apprehensions of new duties have recently organised themselves out of the modern enlargement of mental activity;—obligations to scrutinise evidence, collect details, etc. But we get on too fast.

§ 16. *Cognition and Relativity.*

One topic must be again just glanced at. Two or three times mention has been made of the great importance which has come to attach to the doctrine of Relativity, chiefly owing to the wide application made of it by Professor Bain. Obviously, Relativity must hold strictly of cognition; that is, it is exemplified in every act of consciousness in which intellectual experience is added. It is of the very nature of that sentiency that it apprehends relations. We have even seen how the mode of this relativity finds itself in the germinal phenomenon of the intellectual process,—namely, in the overtaking of inner-acting reminiscence by peripherally-deriving impression, this mixing the experiences and giving the occasion for comparison. Moreover, the efferent

activity, defining and supporting the conditioning of the intellectual experience by muscular adjustment, of necessity incidentally deals with alternative movements. In any case where a *practical consequence* is implied, there is in the adaptation of the doing antithetical discrimination from a different course of operation. Inner and outer, north and south, up and down, etc., necessarily involve this duplicity of cognition, for the conditioning of it is constructively present in the related adaptation of the efferent activity.

But Relativity is further exemplified in all experience in so far as the experience is cognised by thinking occurring in respect of it. If you *name* the optical, auricular, tactual sensations, and speak of blue or red, loud or faint, rough or smooth, you introduce Relativity. As we have so often urged, Relativity is of the very essence of cognition, and, as matter of fact, it is commonly traceable everywhere in the adult experience owing to that having been, as it may be put, *intellectualised*. The question is whether Professor Bain has or has not extended the doctrine too far in making apprehension of diversity a primary condition of *sensory consciousness*. How could the first sensation be had in such case? As was hinted when speaking of the Actualisation of the Ego, it follows, from the fact of there being locomotory-activity in the sense-

organs whenever they are giving experience, that there is a natural progress of the neurotic diagram which practically *adds* a modification in the sensory kind obtaining in the organ; usually doing this quickly, so really supplying change. But it hardly seems possible that there can be any definite contrast of sensory experience without there being diversification of organic conditioning actually present in the neurotic diagram. In that case, owing to the intellectual sentiency finding its natural occasion in that state of things, and associating its style of experience with the sensating, relativity would necessarily come into play. Very likely, Professor Bain implies this rudimentary degree of perception as accompanying the sensations in ordinary adult experience, sensory reminiscence necessarily offering itself. But a still more fundamental question is, whether Relativity does not point to there being in the very mode of the Ego a certain primary complication? We shall have to return to that topic.

§ 17. *The Great Abiding Intellectual Inference.*

Finally, the collective result of the Intellect adding Perception to Sensation by the efferent operations of our apparatus coming to represent the larger executive-activity of the world, and modifications of Impression, in turn, being interchangeable as equivalents for our efferent operation, is this,—that our whole

experience is dominated by a great abiding Inference of the practical relations of the scheme of things.

The executive-forecast of the strictly-limited possibilities of our own doings, and of the enforced unavoidabilities of the world's operations upon us, is always with us; our apprehensions of the management of all the postponements of the massing of Impression, and of the transpositions which are feasible in the executive-sequences, framing a series of great generalisations always applying themselves in our common experience. The names of these generalisations are Space and Time, Substance, etc. Something further will be said upon these subjects in the chapter headed "Metaphysics." But it seemed necessary to recall here that the general effect of the Intellect is to explicate in our common consciousness the apprehension of an external world, where all that happens in our experience of it gives practical limits which we name Space and Time.

Now that we have so far got before us the plan of the executive machinery for conditioning sensory and intellectual consciousness, something more in detail may be said of the Ego; since the further questions relating to the Emotions can be better returned to after that has been done.

CHAPTER IX.

THE EGO.

§ 1. *Restatement of the Law of its Actualisation.*

IT would have been of little use to try to scrutinise the Ego itself earlier. As a necessary preliminary towards attempting to do so now, we had better restate, with a little fresh detail, the Law governing its actualisation, as it was put forward in the second chapter. It may be well even not to hesitate at repetition, in the hope that something may be gained in the way of cogency from presenting the same facts with some difference of aspect.

The hypothesis, then, is that the actualisation of the Ego depends upon the occurrence of specific motion in molecules of the brain, such activity being necessarily challenged there when the fibres of more than one peripherally-connecting sense-organ are operating impressionally, or, in case of reminiscence, operating in a way of internally-arising recurrence.

As mentioned in the second chapter, the first fact supporting this view is, that whenever nervous agitations are not transmitted further than a reflex centre,

—that is, when they arrest at a part of the system where no provision is made in a working-association of locomotory apparatus for unification by coincidence of impressions received from more than one sense, so connecting them in a specific dynamical systematisation through a jointly-prompted *reaction* in a particle of grey matter to which they stand constructively related,—they do not affect consciousness. We know nothing of them: if there were no other more elaborated activity there would be no consciousness then instant. But it may help to render the hypothesis clearer if we make the conjectures it involves explicit in a rather rash detailed example of the alleged process.

It may be assumed to be obvious, we imagine, that the merely vital habituations of the bodily frame,—in the movements of the blood-circulation and in the ceaseless going forward of the nutritive and reparative physiological operations, with the systemic innervation they imply,—give always a *minimum* degree of organic spontaneity. It is difficult to see how this can go on without unavoidably bringing into play some of the fibres conditioning touch and those having to do with temperature,—that is, heat or cold. These fibres always in process of being worked—as we may put it—by the vital organic spontaneity, owing to its necessarily giving slight locomotion of bodily parts,

are not in their habituation, or their constructive allotment, sufficient to stir the cerebral-reaction needed for actualising the Ego, unless in instances of specially-aggregated play (in cases of organs or bodily parts being "inflamed," they can actualise the Ego in an ill way to some purpose, as many a sufferer finds during sleepless nights and days); but whenever by the operation of the extra-bodily forces of the Executive system, light, or sound, etc., impresses another set of fibres starting from the same peripheral grey cellules and running to the same cerebral grey particles, a nervous circle is instantly closed and made effective for challenging the Ego-actualising cerebral reaction,—this effectiveness lasting so long as the needed coincidence is maintained,—the energising of the central molecules naturally starting efferent activity. These renewings and breakings-off of nerve circuits, it is assumed, are going on perpetually, first, according to the natural automatic play of the extra-bodily executive events giving Impression of the sense-organs, and, second, owing to the volitional manipulation in the process of Attention of the incidentally developed activity in the efferent fibres which in adults has become optional, and can itself manage the effective occurring of Impression within the range of the Laws of Attention,— the egoistic actualisation fluctuating from moment to moment, and periodically ceasing

and re-beginning, in pursuance of this conditioning taking effect as finally determined by the Law of Effectiveness. Now we may retrace our steps.

The circumstance to be recalled next in order is this,—that it is quite indifferent to which senses belong the active fibres which the muscular apparatus groups in coincidence for actualising the Ego. Any of them will serve. In the same way, after being actualised egoistically for a period, we can cease through any of the senses, doing so whenever failure in the muscular apparatus breaks the associated activity.

Take the ear as the first example. A man may listen himself into vacancy by hearing the wash of the sea, by noting the rustle of leaves, or attending to the roaring of the wind. Even marking the tickings of a clock may be enough to cause it. All that is asked is monotony, with persistence enough to give a moment when the apparatus slackens and there is a certain failure in coincidence of the associated-activity required to challenge the reaction in the Ego-conditioning cerebral molecules. Punctually at that precise point self-awareness stops. It is the same with the eye. Gazing at the unending stretch of a brown moorland, prolonged looking at the sheer ascent of lofty mountain cliffs, or beholding the ceaseless fall of a cataract, will bring on a more-or-less complete swoon of self.* It occurs so soon as the locomotory activity misses. If, when

we want sleep, it lingers, we try to charm it by making the current sentiency all of a piece. We add numbers together, we mutter the same words over-and-over again: as soon as diversity of sense-experience is banished,—that is, as soon as the abated associatory-activity sufficiently fails,—we slip into unconsciousness.

Or turn to another set of facts. To anyone who has not fully acquired the habit, reading brings drowsiness; that is, he or she has not gone on far before the only ill-habituated neurotic-associations then actualising consciousness fail. An uneducated man remaining quiescent, cannot think consecutively without falling asleep; the ratiocinative cerebral activities are not coincident enough to carry on the egoistic actualisation. Rocking motion will put a very young infant to sleep at almost any time. Similar evidence is furnished by the use of certain artificial modes for more serious ends. All contemplative devotees in the East have some mechanical or physical trick for abating or modifying the egoistic awareness. Purposely-induced strabismus, caused by looking fixedly at the chest, is a specially effective means. In the vulgarised biological exhibitions in Europe, success depends upon the fixing of attention either on some specified object, or on the movements, looks, or words of the operator. It helps that the object looked at should be bright,

but without any interest of form or pattern. Observation fails so soon as the attention absolutely fixes,—in other words, as soon as attention ceases. Of the significant ways in which anaesthetics and intoxicants cause partial or entire unconsciousness, we have spoken sufficiently elsewhere. But simple cold is enough to bring on non-awareness; heat will also do it if feverishness be absent. In a like way, as was earlier pointed out in detail, Habit will give partial unconsciousness, alike of impressions of objects and of our own activities,—this partial unawareness admitting of being localised with curious definiteness.

Indeed, some law of associative-working such as this now put forward would seem to be needed to explain how we ever become unconscious perfectly, and in the finally-abrupt way that we do; for, as was earlier said, the cosmical energy is always challenging the single senses in the way of impressions. The air is never quiet; the activities of sounds, odours, etc., are always stirring. Reference will be made in a subsequent place, where "Art" is considered, to the manner in which the law throws light upon our inability to think of colour without figure, or of form without hue, and how we cannot conceive scents or tastes without other sense-activities coming in however vaguely and faintly. In another place, it was hinted how the law bears upon several

of the fundamental problems of Metaphysics,—the insoluble difficulty of some of the cases clearly arising from there being an attempt vainly made to have consciousness with only one sense-mode.

§ 2. A Practical Test of the Law.

But, as we saw in first stating the matter, there is what may be called a practical test of the Law. It is furnished in the fact that the *minimum* of effective impression through any of the senses is modifiable by education of the associated muscular apparatus. On the principle here affirmed, that conjunction of sense-activities in the cerebral system is practically needed in some way of dynamics to develop consciousness of the impressions and of ourself as cognising them, it follows that all instances of habitual enlargement or abatement of apprehension or awareness result, in the one case, from improved co-ordinations of sense-activities giving earlier simultaneity,—in the other case from disintegration of the joint activity. Let it be noted that Habit, according to the degree of it, can work both these effects,—can, by the happening of a certain happy adjustment of the speed of the apparatus, attain the *maximum* of coincidence, and, when this perfection is reached, a correspondingly slight disconcertion is enough to nullify it wholly. Let us take the former class of instances first. An artillerist will see and follow the flight of

a ball when others cannot trace it. The American-Indians, and, also, trained white hunters, have the like skill, not only in the interpretation of tokens, but in minutely perceiving them. What other cause is there for this than the muscular fibres having been habituated to finer conjoint working? In other words, the point to which the conjunction of sense-impressions actualising consciousness has been carried is not the ordinary one for those cases,—it has been made to begin earlier and cease later by happy repetitions disciplining the machinery. The converse cases are even clearer still. A miller ceases to hear the rattle of his mill,—but these examples have been already fully given in the chapter on Attention.

* All the illustrations are only more striking cases of what fatigue shows us roughly. So soon as exhaustion of the aggregating-power of a special sense, or of the whole frame, got by means of the muscular activity, interferes with the due simultaneity of impressions, we egoistically fail; if it is the first, the more limited case, we are incapable of continuing the special kind of sensory consciousness,—in case of more general exhaustion, we become drowsy. A violent shock will induce virtually the same state as that of sleep, doing so at once, instead of unconsciousness arriving as in the other examples by degrees; instantly oblivion will follow. Old age, in a milder way, shows the same phenomena.

§ 3. What is Really Signified by these Facts.

It seemed desirable to restate these details, but we hope the running comments purposely made do away with the air of mystery which the facts get from the apparent heterogeneousness that they show. The reasonings of the earlier chapter treating of the actualisation of the Ego made out as its chief conclusion, that we are only self-actualised when a certain specific movement is operated in-and-by the Executive System of the physical world,—namely, a reaction which occurs in the central cells of the brain whenever they are challenged by coincident transmissions in the peripherally-deriving fibres of more than one sense, or by equivalent recurrence of coincident sensory-activity reminiscently, as provided for by the mechanism of Memory. In answer to any question as to how it is that our actualisation only occurs along with those precise operations of the Executive System, it can but be said that a Law of Effectiveness comes into play to that effect. Dissociation of the muscular activity, and all the other phrases we have used for explaining the arrest, the failure, the cessation of the egoistic actualisation, consequently simply mean that the specific interquantification or interquantifications of motion during which the Ego actualises is, or are, then not occurring.

But it is with the Ego while it is subsisting that we have specially to do here; and, leaving the above facts to aid in keeping in view the general hypothesis of the actualising-process, we may now go on to note some further circumstances connected with our egoistic conditioning.

§ 4. *The Primary Self-Feeling.*

Along with all the varieties of organic kinds shown in simple sensation, there is actualised identical primary self-awareness. In feeling a piece of metal heavy and smooth, we have the same experience of our identity as in seeing the tracing of a line on paper; it is the same self which is stirred in smelling a flower and in experiencing a taste. Further, the actualisation of the Ego having taken place by the occurring of the *minimum* conditioning-activity, there is no enlargement of the primary self by increase or multiplication of the merely sensory experiences. We can and do increase the number, extent, etc., of the non-egoistic apprehensions, but the Ego was efficiently valid with the first actualisation in the simpler sensory experience. Rather, when the Intellect comes into play in respect of the multiplied sensory experiences there is a temporary appearance of the egoistic awareness being less in comparison. As mentioned in an earlier place, this is explainable. But to recall another point briefly stated in Chapter II.

—not only is there for the purposes of egoistic-conditioning, substitutability of impression at the first moment of actualisation, but in protracted consciousness, so long as the experience is of the same unheightened grade, there may be indefinite changing about of the senses in activity without lapse or alteration of the feeling of self. While inhaling the odour of a rose on the bush, a bird's song may break in upon the ear, and we may listen to the songster, either dividing our attention between it and the flower, or neglecting the rose wholly, just as it may happen; before the bird has done singing, the fruit upon a neighbouring tree may take the eye, and we may abate or stop the listening to pluck the apple or the pear.

More-or-less shifting of the cerebral location of the diagram conditioning self-consciousness will have taken place during these proceedings, but throughout the vicissitudes of the neurotic diagram, if the organic apparatus has continued to be used at the same level, a substantial identification of self will have been continually resumed and preserved. The Laws of Attention, as stated earlier, explain how vividness, rapidity, etc., in successfully-competing impressional or reminiscent activities decompose the defeated neurotic activities, making them non-effective in the diagram. But the point here to be considered is, that this executive-fluctuation, ranging throughout

all the possibilities of cerebral localisation, does not affect the primary self-feeling.

In a subsequent section, the ultimate question of all,—whether the Ego can apprehend itself,—is separately considered.

§ 5. *Invariable Accompaniment of Non-Egoistic Apprehension.*

But the capital fact in which all the preceding details are included now asks some comment. The actualisation of the Ego has for its invariable accompaniment impressional or reminiscent non-egoistic apprehensions. We never are aware of ourselves without cognition of something which is not ourselves. The number and quantity of those non-egoistic apprehensions may greatly vary; the maximum diversity being limited only by the full number of the senses we possess, and their possibilities. At a given moment, we may be experiencing sensation through the eye or the ear, or by the touch, or else through several or all of the organs; and, in the case of each sense, the current experience may be simple,—that of one colour, or sound, or touch, etc.,—or it may be compound, giving harmony, melody, pattern. It is now agreed that in the very nature of the case, none of these events can exist but in connection with an Ego subsisting and experiencing them; just as on the other hand the Ego never subsists without more or fewer of those experiences. The

point was partially dealt with in a much earlier place, where it was mentioned, that, although in the case of the peripherally-prompted actualisations the motion to which the non-egoistic apprehensions are referred (namely, the agitations in the outward-connecting fibres) is in existence prior to the cerebral reaction in the molecules of grey matter with whose agitation the egoistic awareness connects, yet in the prolongation of the egoistic actualisation by reminiscent activity the working of the sensory fibres seems to derive from the Ego-conditioning movement in the cerebral cells, which in those instances might be said to have chronological precedence. All that can clearly be made out, we repeat, is,—that, for the conditioning of human consciousness, there must be a systematised-activity in the organic apparatus, comprising, in its configuration, or, as we have technically phrased it, in its diagram, movement in grey cells and peripherally-connecting fibres. Then, the Ego actualises in apprehending non-egoistic phenomena.

§ 6. *Has the Ego Creative Power?*

The question at this stage naturally arises, Would it not fit in with the facts of the case, to think that the Ego, when it is actualised by the occurrence of the executive events set forth above, *creates* the sensations in modes which are permitted, and in that way prescribed, by the order of the cosmical causation

being specifically favourable at those parts of it,—such exercise of creative faculty being the Ego's own necessary state and condition of actualisation? Modern thinking, let it always be remembered, seems to have distinctly settled that the sensory experiences are wholly added to the executive operations of the material world, having no physical efficacy whatever. Indeed, all the facts of consciousness are held only to exist in respect of the Ego, and to lapse when its actualisation fails. Is man, then, a creature who, during certain periods of cosmically permitted self-awareness, has this power of temporarily creating in prescribed ways, though his fabrications only affect himself, and lapse with his egoistic actualisation?

In the first chapter, in considering the logical alternatives accounting for the temporary additions to the sum-total of existence which the occurrence of human consciousness, with its varying egoistic and non-egoistic phenomena, gives, it was found that one alternative was this,—that, at all times save those when the Ego is actual, the executive-system of the world, by virtue of a fundamental causation common to both styles of being, nullifies, or holds in check, the Ego; failing in this repression at just the happening of those executive events, or interquantifications, which we sensorially describe as the above systematisations of movement in the organic apparatus, giving the respective neurotic diagrams.

But a little reflection assures us that this easy explanation as it there stands is too simple; it is not nearly broad enough in the above statement to take in the phenomena. In the first place, the Ego is wholly unaware of creating the non-egoistic phenomena; secondly, it has no direct, immediate power of uncreating them, however much we often wish it; thirdly, nor can it,—excepting in so far as is possible by a volitional use of the instrumental means which the executive system of the world itself permits and affords,—vary the experiences from a fixedly recurring order. In following up the hypothesis a further suggestion (which has already once before been mentioned, viz., in speaking of the irrationality of some cases of Pain and Pleasure) unavoidably unfolds itself,—viz., if an entity of Mind exists, and these phenomena of sentiency are upheld by it, Mind is an economy larger than the Ego,—the latter, if it ever was commensurate with it, having, from some cause, shrunk and narrowed. It will hardly fail to occur to the reader that this is precisely what those who are called the orthodox religious teachers, using their own theological terms for it, affirm to have taken place. The question, of course, is how they get evidence of it, and what the proofs are. It is a view to which we will return again later.

The great historic question of whether or no, when the process of human thinking has been fully pushed

to its limit and completed, we find it give a set of conceptions which amount to the inference of a second entity, one besides that effectuating the executive system of the physical world,—namely, an entity of Mind,—requires to be discussed at length, separately; and, as before mentioned, we necessarily postpone it to an independent chapter.

§ 7. Does the Ego, when Actualised, add Special Phenomena of its Own?

For the same reasons of convenience, we can only now, in a merely formal way, put forward this further point, which is one of chief importance in this inquiry. It cannot be pronounced upon until the topics of “Will” and “Conscience” have been dealt with; each of which necessarily asks a systematic investigation, for in the categories signified by those names occur the purely egoistic phenomena if there are any such. For this further investigation, reference must be made to Chapter XII., where “Will” is inquired into, and to Chapter XIII., in which “Conscience” is treated of. Whatever opinions anyone may hold upon those subjects, it has to be admitted that the names themselves stand for a mass of phenomena arising in human consciousness, forming experiences in which all the more elaborate Emotions ramify, and which may be generally described as the higher egoistic experience. In further adding what can

rightly be said of the Ego here, we have to anticipate in a wholesale way much of what remains to be offered in respect of Conduct, speaking only of results, leaving for later explanation the processes of them.

§ 8. *The Ego's "Cognition" of Itself.*

No question of Philosophy has been more involved in puzzling controversy than has this one. The discussions have clearly proved it to be possible to put the case in a manner which makes it impracticable to conceive that the Ego can have cognition of itself in the same mode in which it apprehends the non-Ego. But even in that statement of the case we find ourselves still talking of the Ego as if it had a reality of some kind. That there is a duplication in our experience, an egoistic self-awareness as well as apprehension of being which is non-egoistic,—the one having to be regarded in a way of addition to, and distinction from, the other,—has to be admitted throughout. .

Holding the problem before us for a moment in the fixed terms of this simplest statement of it, the suggestion offers whether the difficulty does not arise from a specifically-induced non-versatility in applying to the case of the Ego a style which *ex hypothesi* ought in fact to be restricted to the non-Ego? “Cognition” is a summary-description of our intellectual apprehe-

sions of the causative order of the Executive System in respect of the verified sequences associated with the happening of those multiform events of that order which, taking into our notion the executive potentialities they have, we name "objects," or else speak of more generally as instances of Force, Matter, Energy, etc. To ask that we should know the Ego in this mode is really to overlook the very distinction which is the characteristic of the case, and to require that the Ego shall in some manner become at the same time non-egoistic. The very vital point of what is at issue is this—that the Ego is of another mode.

In fact, the final question is whether there is or is not in us, when unrestricted in the way above hypothetically assumed, a versatility of awareness which validly and sufficiently certifies ourself in our own egoistic consciousness along with, though necessarily distinct in style from, our experience of the non-Ego?

It is easy to understand that the detailed difficulties which perplex this question go back to the facts of the Ego showing cessation in its actualisation and of limitations being imposed upon it while it is actual. That the conception of the Ego as being in itself a reality gets in these ways a shock from some fundamental region of consciousness is certain. The Ego seems, indeed, by virtue of the above facts,

to range itself in the category of phenomena. But the peculiarity of the case is that, when fully considered, this alternative supposition no more satisfies than does the other, since, as we have seen, all our experience is found to be additional to the intellectually-apprehended Executive System. It would seem, consequently, that the experience cannot be logically regarded as consisting of phenomena furnished by that system unless we assume that at the bottom of the Executive System there is a power which can multiply effects,—in other words, a *person*. This at once remits us to the very versatility of conception which we before found suggested, for that power of multiplying effects arbitrarily is what is distinguisingly sought to be conveyed by the word “*person*.” Have we or have we not somehow got that idea? But let us go back a step.

Although our experience is additional to the Executive System, the Ego, as was above stated, has no consciousness of creating sensation. : It is clear from this, that if the Ego ever was creative it is no longer so in those modes; but that if creation of such kinds is still going on in connection with the scheme of the human creature, it arises outside the limits of the present recurring actualisation of the Ego. Again, we find the inquiry lead us to the hypothetical question,—“Is it possible

that something has historically happened to the Ego,—that it has undergone catastrophe at a prior stage in the career of the race, through which it shrunk into a fixed narrow sphere, its causation having been, so to speak, arrested in some portions of it at a certain moment of operating, namely, those portions answering to the present sensory, etc., experience; such creation now taking effect from causative efficacies of the human mind, but doing so in regions of mind outside the limits of the present egoistic-actualisation?"

This obviously is a huge hypothesis. True, it is no real objection to it, that, in stating it, we have to use the phraseology which we apply to the non-egoistic experience, for according to the hypothesis that very experience derives its classification from mind. But what presumptive evidence is there to be put forward to warrant the view being entertained at all? There are just these circumstances,—first, some cases alike of Pain and Pleasure, as pointed out in Chapter III., show striking "irrationality" on the supposition that nothing has happened to the Ego; secondly, all the modern scientific conclusions of physics go to suggest that the sensory, etc., experience is wholly additional; and thirdly, as we will state more in detail later, we all in case of volition have a persuasion, even if it be illusory, that we have creative ability to that extent. Nothing

more in the way of support for the hypothesis seems available; excepting that we may add the further circumstance of the conceivability of a dependent being having a limited power of creation available on occasions being furnished in the order of the doings of a Superior Being. Any attempt to follow such a hypothesis one inch further points the way to a region of Dogma, which modern scientifically-habituated thinking shrinks from looking towards. Every man must decide for himself whether in the practical conduct of life any evidence is afforded to the effect of assumptions of this logically-unproveable kind having a truth, which, though not demonstrable by public prob^f, gives a private intelligibility to his fundamental consciousness. All that it is open to us to do further here is to repeat the question, whether or not each one's experience, when regarded in a natural way, apart—if such a thing is possible—from the confusing requirement that the Ego shall become objective to itself in the same mode as the non-Ego, develops a versatility which gives, not "cognition" in the same style as our knowledge of the non-Ego, but a self-awareness which has its own sufficient validity?

It is a fact, that everybody in his practical conduct witnesses to a natural persuasion to this purport, and all the arrangements of society are based upon such an assumption of the Ego having reality.

Only when a man is subsisting in a certain mental state,—the one in which he is most largely attending to that in his experience which is classified as non-egoistic,—does any puzzle as to the possibility of the Ego being real in a way of its own arise. Is that the right condition of consciousness for the experience to give the versatility which is in question? For turn now for a moment to the case of volition. All are more-or-less agreed in saying that when our volitional muscular-activity is being exerted it is impossible for even the most scientifically-habituated to avoid the persuasion of being executively effective. That there is great illusion in the persuasion in all the ordinary experience is certain, as will be made clear in more fully considering the topic of the "Will." But the question is whether an illusion can come about without any circumstance to found upon? It is, at least, conceivable that if the Ego ever had creative power, this unriddable feeling of executive-efficacy is a survival of that reminiscence lingering egoistically. Here the matter must be left for each individual to deal with it for himself at the last stage.

The natural answer, then, to the question of the possibility of the Ego knowing itself is, that, reserving the possibility of scientific reasoning proving that it is an illusory persuasion, each one has a self-awareness which is not the same in style as

our own apprehension of the non-Ego, and that this self-awareness in the experience of volition somehow defines itself into a mode answering to that of a creative ability.

The other question which stands in relation to this of the Ego,—namely, whether there are any considerations furnished by a close observation of experience, and by ratiocinative dealing with the observations, suggesting the existence of an Entity of Mind in addition to the Executive System,—will, as has been before mentioned, be turned to in detail in a later separate chapter.

The point here to be distinctly stated with a view to that special resumption of the inquiry is that every diversification of experience necessarily implies an unifying egoistic complication in respect of it.

§ 9. *Practical Inadequacy of the Single Division into
Egoistic and Non-Egoistic.*

In several of the earlier chapters the practical inadequacy of the single division of experience into egoistic and non-egoistic was again-and-again noted. Refuge had clumsily to be taken in such phrases as “the *more* egoistic phenomena,” and so forth. The reader familiar with these investigations will know that Sir William Hamilton devised very elaborate verbal formulæ to remedy this practical need. Dealing with subjects in the more general

way which we are alone attempting in this treatise, it would have encumbered the progress of the inquiry to have followed it out into such detail. It is, however, necessary, in passing, to mark the fact, that although the distinction of experience into egoistic and non-egoistic is that which ultimately governs all, and has ever to be kept in view, and from time to time fully recurred to, yet practically other divisions are necessary. For instance, there is a meaning of the term in which the Emotions are as non-egoistic as the sensations. The fact, in so far as is requisite, will have re-mention subsequently,—it finally refers us to the ultimate egoistic realm of the Conscience.

§ 10. *The Primitive Ego and a Reminiscently-Identifiable Personality.*

We now may add that the Ego, although it includes all our possibilities, since without its actualising in some way we were not at all, is hardly capable of being considered apart from its definition into a personality with remembrances of the past and hopes of the future mixing in the present experience, broadening and heightening it. In later remarks we shall have again-and-again to return for a moment to the question of the naked Ego; but practically we have here to take the Ego at a stage later than the first moment of actualisation. In the

developement of human life, a man is much more than a mere primary self; he obtains a series of ascending self-identifications, perfectly real within the range of their own constitutive reminiscences. It is to the amazing possibilities of transformation in this experience of personal feeling that we now call attention.

The Ego includes the potentialities of many personalities; its unity is so far real that all of them are possibly recoverable, but this is not within its own power,—it depends for that upon the large action of the world about us. Let us make the point quite clear. In this distinction between the rudimentary Ego and Personality regarded more specifically, we mean by the latter the self-identification which the former gives in successive grades of exaltation, by its own natural process, such self-identifications being at every stage fixed and limited by the range of reminiscence obtaining at the time. But if the mathematics of the recurring actualisation of the mere primary self in the experience of simple sensations be not yet attained, it is hopeless to speak of those of the higher experiences. In reference to these superior grades of self-consciousness, we can go no further in the way of stating causation than to say that, when Attention has elaborated Will, and added its reminiscences to the self-criticisms which are named Conscience, and

the intellectual and emotional activities are fully in play, the sense-experiences are capable of having imposed upon them, at successive stages of heightening, representative symbolical styles, which give the occasions of the sentimental phenomena of the superior kind; ever progressively accumulating enhancements of reminiscent experience, ranging from the fine, pale, cold, rational apprehensions to the rich, full, spiritual passions, according to the height and complexity of the persisting and enlarging inner-activity.

But although for the subtle complexities of symbolical experience afforded by these representative activities, we are without any calculus, we can clearly perceive that they require a certain large consitancy of operation in the sensory and general cerebral system in a way more-and-more intricate as the experience heightens. For each one of these steps of enhancement has, when it is fully constituted, and prior to the energy beginning to subside, a power of appropriating and retaining the use of the sensory apparatus preferentially by a superior attention, which, up to a point where it fails, precludes distraction. As mentioned when treating in detail of Attention, the saint may smilingly unheed the fires of martyrdom.

However, the point immediately in hand is this,—that the Ego is not quite entirely and restrictedly

samely "identical" in self-recognition beyond the first stage of merely direct sensory consciousness, all experience beyond-and-above framing a series of personalities, each of these additions being self-identifiable only within the limits of its reminiscently-constitutive process as at the moment existing. We are not of necessity always—and for no inconsiderable part of our time we are not actually—the same persons merely; we only of necessity carry on some degree of historic self-familiarity, and may at any instant become precisely again what we have been. This latter relapsing takes place with great frequency of repetition, and for practical reasons which lie upon the surface, the potentiality is accepted by everybody as a present actuality. But the commonly inadequate recognition of the true state of the case prevents the organising of a specific feeling of no small significance, which would be given by a right apprehending of the great transformability of self-identification. No one can hope fully to understand the possible versatility of personality without making a set effort to recognise the enormous difference between the type prevailing in Europe and those obtaining so largely among Orientals. A study, for instance, of Hinduism shows that there may be in human beings a self-identification such as an ordinary Englishman would think impossible. Even Christians confining the inquiry to themselves will discover great possi-

bilities of variety if they will fully inform themselves as to the ancient mystics, as well as compare Roman Catholics and Protestants, and inquire into the differing types afforded by sects among the latter. But, foregoing that historical task, let us return to the subject in a narrower, more particular way.

§ 11. *Self-Feeling and Narcotics, Intoxicants, etc.*

Not only by means of narcotics and intoxicants can consciousness be partially or wholly suspended, but the currently-subsisting personality can, within limits, be made by their influence to approach to a given pattern. It is only requisite to attack the organisation fundamentally in a specific manner, and the alteration produced in its sensory processes will modify the workings of the experience at higher stages. Everybody knows how many men under the influence of merely general stimulation by ordinary intoxicants, become for the time very different in character. But the matter may be pushed further than this. Specific intoxicating or narcotising substances will, in instances where there is sufficient knowledge of the individual peculiarities beforehand, give predictable turns of transformation. Under their influence feelings and acts of very special kinds will be caused: the customary sentiments and volitions giving the ordinary habitual self-identification will be largely absent. Simple disease, in a

number of its forms, will change a man's self-feeling. Physicians now accept these alterations in the disposition as very significant symptoms. The action of a drug in a medicine upon a man's moral experience becomes a means of diagnosis. In cerebral affections, amounting to chronic insanity, nearly perfectly complete transformations of personality take place; the thread of self-identification is all but lost, the actualisation of the Ego is no longer the same. A man may live for years, even to the end of what remains of his life, without exact resumption of what he was, without any full recollection of how he felt and acted in all his existence prior to the date of the attack. On the other hand, if he recover sanity, he may have no reminiscences of his self-consciousness during the days, months, years of his delusion. The two states of the Ego are so far apart, and the conditioning-activity of the organism has so abnormally happened, that it is not possible, without some extension of egoistic range, for him ever to mix the reminiscences of those states. In both cases—and fortunately so in one of them—there is positive limitation of the historical range of the Ego; for, as we have urged, exact sameness of personality can only exist within the limits of recoverable, affiliated, mixable reminiscence.

The like break of continuity can and does occur in instances not so distressing. It cannot be doubted

that in the case of individuals in the biologised state the Ego is acting. Much of what they do is automatic, instinctive, but some parts of it must carry egoistic actualisation, that is, self-consciousness. The individuals, however, cannot recall in the waking state what they felt, thought, and did in a mesmeric trance or a somnambulist ramble. But put them again in the biologised state, and they can take up what occurred on the prior occasion; just as we can resume dreams in subsequent sleep, carrying them forward. A more vulgar class of cases shows that it is possible for drunkards to forget what happened to them in the sottish state, the memory of it being irretrievable when sober; the recollection of it is not practicable until they are made drunk afresh.

§ 12. The Ego has not Command of the Cues of its own History.

In one word, the Ego has not the full command of its own history; its self-recognitions in respect of the actualisations of personality through which it has passed are strictly limited by the happening of the reminiscent cues in the working of the organism, prompted by the impressions of the present situation fixed by events. The maintenance of identity of personality depends upon the required proportion of reminiscence being duly kept up in the successions of experience, helped only by such tracings back and

reasonings out by volitions and habitual acts of Attention as we may acquire for this retrieval of self. If that fails, personality undergoes the consequent alteration or limitation. We may be changed to a very great extent, the use of the personal pronouns having at periods rather a physiological than a moral significance; practically qualified, however, by the possibility of their becoming morally applicable at any instant.

It is this possibility which gives to the Ego its terrors. We may find ourselves affrighted with amazements at any moment, if the structuralisation defining personality is not made safe. The striking changes in character above spoken of as shown under the influence of intoxicants, narcotics, etc., are simply disclosures then made of deficiencies in actualising-structure. The framers of the Christian doctrine of Sanctification were more scientific than they knew. But it is not within the limits of our task to become hortatory at this point. Consider, however, the imperfectness of the range of reminiscent cues available to the Ego from moment to moment for the constitution of its current self-consciousness. In the case of an adult person, the reminiscence operating at any instant in his actual sentiency is very small indeed compared with the bulk of the experience the Ego has gone through.

But, if we descend from these more striking in-

stances of the capability of partial novelty of egoistic consciousness, we find the like evidence offering itself at lower levels. Any event bringing great alteration in position, fortune, or surroundings, changes a man's current personality. The degree of this modification is often much underrated: the change is set down to affectation, to pride,—that is, it is not accepted as real. Usually, it is far more actual than most spectators think it is. Falling in love translates everybody who experiences it, and in this fact lies its wonderful charm. Success and failure in more ordinary matters, in even ordinary business, remake a man in great measure. The mere passing of time transforms us. A man who is advancing into years suffers astonishment when he anything like fully realises bits of his youth.

§ 13. *The Mode of Dissipation,—the Use of Art.*

Dissipation is the sheer abuse of this possibility of novelty of personality in us; but, if the power of modifying self-consciousness did not exist, dissipation would be out of the question. With many the most trivial methods of this kind avail. A constant whirl of gaiety, an ever-varying glare of society, will, for longer or shorter periods of time, keep a man fresh to himself. Change of place, contact with strangers, or even variation of the scene by the introduction of bustle, will always in more-or-less degree omit the

stale self-identifications, unless a shock has overmastered the action of the organism in the line of some special reminiscent cues, thus morbidly preventing impressions from being effective. It is true, as we will point out more particularly later, the wholesale discarding of massed reminiscence aimed at in dissipation tends towards a diminution of egoistic consciousness of *any* kind, making the nervous activity progressively reflex. The final consummation is stopped short of, and *ennui* intervenes, but that is simply because some of the reminiscent cues of some of the self-identifications are too inveterate, and the means of gaiety are not inexhaustible in versatility. Events insist upon a *minimum* of sameness at the least, no matter how they are made to whirl. But for these two circumstances, dissipation might go on varying the personality indefinitely.

On the other hand, let us hasten to say that it has another aspect which is brighter and better. Just as the actualising process of the Ego may be weakened, degraded, destroyed by disease, shock, excess of stimulants, so it may be extended, sustained, invigorated by large impressions of natural scenes and objects, and by enjoyment of the achievements of Art. The great use of Art lies in the reinforcement and embellishment of the self-feeling by providing opportunities of large actualisation. An

unusually full, rich, happy exercise of any of the senses, in such a way as to implicate reminiscence, tells immensely in improving the feeling of personality. In this consists the influence of music, perfumes, etc. Look at the effect produced in rousing hope, aspiration, intention, by grand architecture, sublime scenery, by lofty beauty in each-and-all of its forms. In the large, heightened sensory impressions, the basis of the superior experience is widened, but with this important proviso,—that if the impression of the sense acting as the leading one at the time goes beyond the combining powers of the reminiscences of the other senses, it, at a certain stage, sinks the Ego into unconsciousness by virtue of the fundamental law requiring more than one point of organic activity for its conditioning. In the expiring reverberations of this failing consciousness is given the pleasure of Melancholy, which in its favourite scenes will always be found to ask a large expansion of sensory impression of some one kind. The personality, as it fades away, may afford the strangest patterns of sad poetical joys.

§ 14. *The Still Higher Egoistic Possibilities.*

We have just spoken of the possible failure of the fundamentally enlarged experience, taking for the example what may be termed a trivial instance,—but what of its successes? Its prosperous examples

give all the higher ethical and spiritual experiences,—in successively heightened transformations of self-identification, enhanced perfectly from stage to stage by accretions of associable reminiscence. For, as mentioned in an earlier place, Experience discloses a Law to the following effect:—A further item of reminiscence, added in a certain order, can transform the whole of the current consciousness into which it enters, giving, it may be, a self-identification of personality enormously different from that of the same other facts without this addition made to them.

Here only do we find the *rationale* of moral philosophy and religion: by means of a scheme of persuasions, beliefs, etc., the possibilities of alterations of self-feeling are specifically developed. For instance, contemplation of Jesus Christ in a particular way, along with memories of your own doings,—a system of beliefs connected with Christ's name being, also, present in the mind,—gives a certain form of recurrent self-consciousness which has prevailed now for many centuries in all the West and in some portions of the East. In this way the sinner becomes the saint; the personality is transfigured. The transfiguration is for a long time very unstable. A fever may upset it in most; with many, a glass of wine too much, or contact with a wrong individual, or entanglement in a pressing piece of

business, is enough to obscure it. Then, certain means of retrieval have to be tried.

The great psychological idea which is popularly assumed for the practice of the Christian religion, is a vaguely-apprehended possibility of total self-identification,—if only during a fleeting moment of a Great Judgment,—including all the sentiency of our experience throughout the whole history of the Ego. That this is a magnificent conception must be allowed by those who say it is an article of religion only, not a reasoned conclusion of science. An enormous extension of the human faculties, and a high complication of the scene furnishing the reminiscences, would be required for it. However that may be, it is easy to see that the human Ego has possibilities of dramatic surprises not dreamt of, if there only occurred even a partial widening of some of the present egoistic limitations. A bringing together of certain of the sundered cues of reminiscence might give us new self-identifications of a startling kind. It is a matter which can be decided alone by the actual unfolding of our destiny.

§ 15. *Inter-Variability of the Egoistic and Non-Egoistic Dividing Limits.*

One further point, previously alluded to, we purposely left for mention again at this place. The affirmation of the multiform possibilities of per-

sonality must be distinguished from saying yes to the old and still surviving question, whether the Ego has duality. The issue we raised earlier, in asking if the facts of Relativity do not hint that the Ego has primarily a complexity in its own mode, is a wholly distinct problem.

Unquestionably, in some forms of reverie and in dreams, we seem in our arguments, our picturings, our thinking generally, to deal with a person besides ourself. In dreams, for example, the facts lodged in our personal reminiscences, the reasonings which flow from our own ratiocinative faculties, may be used outside the current-actualisation of the Ego, being quoted against us by imagined antagonists. We may, as has been often pointed out, be worsted in such discussions. The same thing indeed occurs again-and-again in our waking moments. In this there is an appearance of much mystery. The explanation, however, seems really to be given by the fact before urged, that personality may be actualised by a part of the sensory and cerebral apparatus, and that so soon as an Ego-actualising neurotic diagram is specifically formed, the blood-supply is so drawn upon, and the play of the efferent-activity in connection with the Language-faculty and the emotional-expression so set, that the rest of the brain which may come to be implicated in operating falls into a non-egoistic relation to that part, being not

capable of efficiently connecting itself with the higher constitutive-process of the egoistic sentiency, unless the latter, by a reaction of Will and Conscience (of which we have yet to speak), enlarges itself and takes possession of it. In the absence of that occurring, the other parts of the apparatus, though stirred impressionally, and in an automatic way acting reminiscently, remain in their activity at a neurotic grade next below the egoistic; and the cues of that grade are those giving the imagination of converse with a second person. But, it may still be asked more particularly,—what is it that delimitates the range of the inner, higher diagram, deciding that the cerebration within such-and-such bounds shall give egoistic experience, and the cerebration beyond those bounds non-egoistic experience?

All that we can do in the way of attempting an answer is to amplify the surmise above hinted, that it mainly hinges upon the action of the efferent nerves,—that the activity which remains non-egoistic is that which cannot break through the charmed circle of their play, as it is constituted by the diagram already at the time obtaining. It is of the essence of the efferent-activity that it shall preserve developmental-continuity in a certain order, namely, that practically adapted for working out the diagram which shall first effectively set it up. Obviously, any great interference with such an activity would confuse and

practically dislocate it,—in fact, arrest and break up the diagram. A diagram once egoistically constituted must, consequently, run its course for some time confined to such portion of the apparatus as it practically and virtually took possession of at the time of its constituting. On the other hand, the efferent-activity by the natural working of it must frame a “situation,” giving the cues for non-egoistic experience fitting in with itself, and the issue falls decisively at certain points on the egoistic or the non-egoistic side accordingly.

In the first chapter, we said that, stating it roughly, the proportion in which the experience was egoistic and non-egoistic at any moment of consciousness was settled by the number of senses acting;—objectivity increasing as they numerically rose, subjectivity as they fell. The reason of it is clear. The complications, and therefore the restrictions, of the efferent-activity follow precisely the same rule. If a thing gives a sensation merely, developing no practical consequences, the diagram formed is passively egoistic throughout; if it carries critical results, as it must do if it appeal to several senses, necessitating something to be thought out, designed, done, the efferent-activity first started must conserve itself, and all stirring outside it is non-egoistic. Drowsiness, sluggishness, or any incapacitation of parts of the organic-apparatus witnesses

to just the same effects. On the other hand, the slightest observation will enable anyone to perceive how, as his efferent-machinery on any occasion comes into play, the egoistic consciousness more-and-more sharply defines accordingly as reintegration takes place at a higher stage. If muscular effort is resisted, there is egoistic exaggeration; the Passions stir. The great charm of games and sports to children, and to some adults, arises from these temporary enlargements of the Ego's actualisation. A very close observer will get curious corroborations in noting the fadings of consciousness before sleep: as the muscular system relaxes, the non-egoistic part of the diagram enlarges. He hears himself spoken to, etc.

Assuredly, in our broadly-waking moments, when the apparatus was competent throughout for the full actualisation of the Ego in the personality started by the highest cues then operating,—so that no part of the apparatus was dismally barred from the constituting-process,—the arguments, the retorts used by a fancied opponent would be portions of our own egoistic-ratiocination in weighing the matter; making up the then recoverable total of what we had heard, read, gathered upon the subject, but de personalised in reference to other sources, having been appropriated and made our own by the higher egoistic processes. It is, we repeat, owing to a partial

disablement of the organism in reverie and dreaming that some of the reminiscences fail to be unified in the diagram conditioning the current self-consciousness, and from the lower level give the inferior historical cues of a second person, the emotional-situation thus framed working out its own details. The same thing occurs, with all degrees of exaggeration, in delirium and mania. Mere fainting shows it partially; so, all individuals, as we have just mentioned above, exhibit it more-or-less in falling asleep in the earlier stage. So soon as there is lack of blood, excess of it, or failure of unification in the action of the apparatus from any cause, these apparitions of seemingly non-egoistic creation arise. How the fact is economised for moral discipline through Temptation will be mentioned in another place.

The point of importance is this,—that the complicating of the consciousness with a second person is not, as it pictorially seems to be, a heightening of the experience; it is a degradation of it,—simply a failure in the actual range of the Ego at the time as compared with that of its fully waking moments. In every case, if we could be completely aroused, the second person would vanish out of the ratiocination. The oracular inspirations of dreams, etc., which make such a figure in history, and which still are poetical to many, are, in fact, merely the failure of the egoistic-reminiscence proper.

It may help to make the matter clearer, if it be pointed out that the exact converse of the process may be witnessed. In certain cases of drowsiness, when the Ego is only imperfectly and with difficulty maintaining its consciousness at just the lowest grade, outer impressions are taken for internal suggestions of our own. The efferent-activity is so lax and slow that at intervals it can take in anything. If, when a man is nearly asleep, he be bid to do a thing by someone near, it is possible for the sensory impressions to pass into consciousness in so far that the purport of the suggestion is known, without it being recognised as an order; and the individual may proceed upon it, may carry it out, believing that he is acting from the prompting of his own mind. How can he do anything else? All the grouping of the impressions giving to the occurrence the characteristics of an order from another miscarried owing to the sluggish state of the organism; on the other hand, the Ego was only subsisting in an actualisation derived from the very lowest grade of diagrams, and what impressions did take effect fitted in with that actualisation, stirring the cues only of an activity willed by the man himself. In this case what proceeds from a second person is absorbed into our identity; just as in the other case, our internal activity is split, and a second individual is supposed in the mind.

§ 16. *Hints as to the Cerebral-Mode of Literature and the Fine Arts.*

And here we come upon a hint as to the cerebral-mode of Literature and the Fine Arts. All dramatic work implies large and special happenings of this intervariability of the egoistic and non-egoistic dividing limits: our own most private egoistic experience at those times takes on, by a hap of adjustments,—or we might, in some of the more striking cases, say, a cerebral trick of being thrown outside the inner egoistic-actualisation,—a representative character, the truthfulness of which is recognised by a response in the Ego of others. In lyrical composition the activity is kept fully egoistic. The manipulatory Arts, as distinguished from Literature, ask a special fineness of natural and acquired muscular-co-ordinations in connection with some one or more of the sense-organs to give the ability of full articulateness. That completes the account of their process. It would rather caricature this explanation of the cerebral-mode of Literature and the Fine Arts to say that Genius means a failure from time-to-time—that is, at its productive moments—of the higher brain-process, the one which fully frames the egoistic-actualisation: for besides the fact of this superior non-egoistic activity of necessity implying superior egoistic activity previously, —these very brain-habituations having been at other

times within the egoistic diagram,—this inter-variability happens to everybody, to those who are not possessors of genius, in every case furnishing a large part of the business of Conduct.

The facts of penitence, remorse, etc., are phenomena of Conscience, and require a separate dealing with. In those ways the Ego becomes self-critical: it does so by exactly the same process,—a higher diagram starts out of the lower. So, too, *amour propre*, in its different forms, makes up very much of Conduct, becoming so habitual as to form prevailing features of the character,—vanity, pride, etc. Every man must pay regard to himself historically, but that is owing to his being a cause of his own modifications of consciousness. His position, his past doings, his general fortune, are only facts as other facts, but they include the others. But nothing of this amounts to duality of consciousness; the phenomena relate only to particular states or forms of personality in which the Ego is self-critical. In its higher aspect, the matter will necessarily be dealt with again when speaking of matters relating to Conduct.

Of course, nothing of what is said above contradicts the fact of the brain showing duality physiologically.

§ 17. *The Perfecting of Personality.*

Lastly, comes the question of the extending and

perfecting of personality by habitually widening and exalting the complicated activities of the superior egoistic-processes to the fullest limits in all the occasions. A complete explication of this point would give the Scientific Doctrine of Virtue. We must here content ourselves with saying that the final superior form of personality is the unselfish,—meaning by that the universally sympathetic form. Selfishness, technically described, is inability to use more than the coarse, vulgar, unsympathetic cues of the apparatus in the narrow cases directly involving ourselves in a present non-ascending, it may be a dwindling, failing egoistic-actualisation. Practically, it narrows reminiscence at every repetition. The test of Conduct, in fact, summarily stated, is this,—Whether a man is merely using up reminiscence in inflating the feelings by degrading and weakening the cues of its recall, or else in the frittering, hap-hazard novelties of dissipation, or if he is getting legitimate extensions of personality by further accreting right memories in the very act of using them? Self-denial is the way, and the only way of doing this; since only by such habituating of Attention to act more largely can be got the required multiplication and widening of the cues of the apparatus's activity. Perfection of personality is attained only in so far as the egoistic-diagram, owing to the cues having become fully sympathetic, appropriates the fortunes

of others as part of its own activities, regulating the conduct by this mutuality in consequences,—the joys preferentially aimed at being the enlarged ones which include the good and exclude the evil of others. But here the whole question of Conduct and its critical rules is involved.

It will be seen that no attempt is made to include in this chapter a historical survey of the views which have been held as to the Ego. The temptation to refer to the teachings of the great German thinkers on this point is great; but, as stated at the outset, that historicocritical method had to be set aside in these pages in favour of an attempt at expository inquiry.

The ultimate problem, already more than once hinted at, of the primary mode of the Ego, is designedly postponed till later, when the Will is being considered. To try to deal with it here would involve much anticipation.

CHAPTER X.

THE EMOTIONS: THEIR GENERAL MODE.

§ 1. *How they are "Conditioned."*

THE scale on which this work is planned precludes the attempting to do more than give a general exposition of the mode of the Emotions. Large space is needed for what may be termed the physiological-description of the phenomena separately, noting in full the distinguishing characteristics of each, and demarcating their range. If besides the more simple Emotions connecting with *non-metaphoricalised* sensation, the higher sentiments compounded by associations of the primary feelings,—the sensory experiences then instant rising into the metaphorical stage,—be taken into the account, the inquiry would be one of vast detail, and run into very fine complexity. Something, in brief, will have necessarily to be offered later in respect of these higher experiences when treating of the Conscience; but, in so far as the first part of the task is concerned, even if there were space and ability in plenty, all obligation on later inquirers to task themselves with detailed description is done

away by Professor Bain's labours in this field. Those wanting information as to the physiological-embodiment of the Emotions will find the particulars in surprising plentifullness ready to their hand in his great treatise on the subject.

It is, however, directly within the scheme of the present inquiry to try clearly to make out, in a general way, how the emotional-consciousness is conditioned,—that is, to ascertain to what part of the operative-process of the minor executive-system (viz., the human bodily-organisation) it has to be causatively referred in the manner which, in speaking of the other styles of experience, we provisionally called chronological association. After trying to do this, a general example of the possibilities of the elaboration of consciousness may be of use, as they gradually show themselves in a formularisation of the Laws of Beauty in its lower domain of the sensory experiences, before the metaphorical heightening of sentiency is superinduced.

In earlier chapters conclusions were reached to the effect that the egoistic-actualisation connects chronologically with a specific motion in cells of grey matter in the brain,—namely, a reaction originally prompted there by peripherally-aroused vibrations in nerve-fibres of the different sense-organs; the egoistic awareness being referable to the cell-activity, and the non-egoistic phenomena, simultaneous with that self-

consciousness, being conditioned and determined by the movements in the fibres,—specific rapidities, volumes, directions, etc., having to occur in those movements to make practicable the diverse sensory phenomena. Further, we saw that the intellectual experience showed a connection of this conditioning kind with the efferent-activity which is naturally set on foot by the overflow, so to speak, of the energy discharged in the egoistic cells when challenged by the agitations transmitted in the sensory fibres,—a precise quantification of *tensions* in the volitional muscular-apparatus having the like diversity of conditioning-value as is exhibited by rapidities, volumes, and directions in the sensory experience.

What we have now to ask, in order to have before us a complete plan of this conditioning-and-quantifying process, is, with what events of the executive-operation in the human apparatus does the emotional-consciousness chronologically connect? The answer which a full consideration of the whole of the facts seems to suggest is this,—that these last remaining phenomena of our experience are conditioned by the occurrence of specifically-enlarged quantities in the egoistic cell-activity, arising along with wide or intense Impression and simultaneity of remembering and imagining, and by the modes in which the motion of that cerebrally-originating reaction distributes itself in the efferent-machinery, starting the

intellectual apprehensions of causation, and, in the effectuating of bodily motion, giving fresh sensory impressions, reassuring or the contrary,—aided further by a physiological constructive-arrangement which converts the nervous system known distinctively as the Sympathetic into a reverberatory, multiplying, and delimitating apparatus.

If this be so, we have finally before us the full scheme of the use of the nervous machinery in respect of the lower primary consciousness; all the nerve-motion being appropriated for conditioning and quantifying ends; the higher styles of experience getting their quantifying by the sensory-cerebral activities at a certain stage taking on—owing to an exaltation of the egoistic-actualisation—a metaphorical character, and being used afresh at a heightened grade in a way of subtler significance.

§ 2. Summarised Statement of the Evidence.

Already it has been mentioned in several places in earlier chapters, that the Emotions have a complicated system of physical-expression, comprising facial movement, attitude, gesture, and intonation; a conventional education in these respects modifying the primitive impulses as soon as human beings develop social usages, but those impulses being necessarily the basis of the conventional modifications. It was pointed out how largely Art, in its plastic, pictorial,

poetic, and histrionic modes, consists of the delineation of this well-understood bodily-expression of the Feelings. But if we reduce that amplified account to the bare technical scientific-statement underlying it, we at once see that it asserts a connection between the Emotions and the organic and efferent activity, taking in both the volitional and the automatic kinds of it. So much as this is, indeed, suggested by the word itself used for the general name,—viz., Emotion.

The first step towards a detailed explanation was briefly indicated in the chapter dealing with Pleasure and Pain. The fact, that our bad Emotions (except in certain explainable cases where the effect is so completely distracting as to be paralysing) prompt violent muscular-movement was there urged as a striking proof of the hypothesis that Pain in the sensory stages of it implies defective impression of the sense-fibres, such defective activity producing an unhabitual, ill-balanced discharge of energy in the Ego-actualising cells, which thereupon give a wild, distorted prompting of the muscular-machinery. That first nearly-undirected efferent or organic spasm is soon so far controlled as to frame a snatching effort at withdrawal, escape, and mitigation of Pain: but in the earlier infantile cases it seems to be simply spasmodic. This, however, is a point which will make itself clearer as we go along. The complement of the above reasoning would obviously be,

that in cases of Pleasure—for which, according to the views laid down we necessarily presuppose full, large, perfect activity in the egoistic-cells—there is a still greater overflow of discharged energy into the systemic and efferent fibres, but this time in a harmonious, symmetrical, economical mode of distribution, which may, in effect, give restrained quietude.

Is not this exactly what is witnessed? Just as we start back in affright, shudder in loathing, shriek in rage, so do we (unless a restraint of quietude is prompted) rush forward in pleasant anticipation, expand when we are stirred towards love, and sing and dance in joy. The physiological implication of the efferent-activity may be traced from stage to stage. For instance, the good and ill feelings alike may begin with a shock of surprise; that is, the event may so far take us unawares that there may be no muscular-adjustments ready for easily transmitting the impressionally-prompted cell discharge to the efferent-apparatus. If, however, the news is good, the spectacle delightful, the event auspicious, the progressively-enlarging egoistic activity will so increasingly multiply the efferent cues in a way of rapid overtaking, that before there has been time for much pain to have been experienced from the disintegration of defectively-challenged muscular coordinations, the reintegrating process will set in, converting the very shock of surprise into a heightening

of the gratification. In exactly the same way, if the event as it fully discloses confirms itself as a disastrous experience, the first start of surprise may deepen into alarm, sinking thence lower still into horror,—the accumulating disintegrations of the efferent-activities adding by their own painfulness the last finish of distress to the ill experience. But let us try to follow the details further.

There is no difficulty in apprehending how in the case of the bad Emotions, the distorted, baffled, wrongly-challenged cerebration started by the defective impressions interferes with the habitual innervation of the thoracic and visceral organic-apparatus (ordinarily going forward automatically), partially arresting it by a scattered-distraction. This, in fact, gives the explanation alike of pallor and blushing, also, of tremor, panting, heart-palpitation, which more-or-less occur in both sets of emotional experiences, ill and good; for there are many instances on record in which, the lucky happening having been very unexpected, the derangement of the Sympathetic Nervous System has not been able to be retrieved in time, and joy has killed with as great suddenness as grief. But not only does the modern scientific acquaintance with the nervous system and its processes explain these alterations of aspect and the fundamental adjustments of attitude, etc.,—in fact, the whole expressional-phenomena of Emotion,

—it, also, hints at the specific physical-conditioning of the multifarious diversity of sense-experience given in the Feelings, both of the good and bad classes.

Failure of stimulus in some of the visceral nerves happening coincidently with the sight or touch of objects which are named disgusting,—these impressions instantly stirring associated ill reminiscences, so upsetting the current cerebration as to break most of the acting efferent-operations, and violently reverse a great number of them,—accounts for the internal feeling of loathing, as well as for the wild checks of progress and substituted backward shrinking. So, too, the larger innervation of the whole frame consequent upon wide happy cerebration when the egoistic-actualisation is being prosperously maintained, not only gives a reason for the steady rising of the pulse, the roseate flushing of the face, the adding of resonance to the voice, full glitter to the eye, and for greater freedom of consentaneity in gesture; but it explicates, in just the same way, the specific diversification of the joy through all the list of its good experiences,—the special sensory characterisation depending upon the altered order of the organic-innervation.

But, as is mentioned at the beginning of this chapter, Professor Bain has supplied such detailed examples on these points, that the only duty weighing on any subsequent inquirer is to point to his pages.

In all this, however, it should be borne in mind that the Emotional Phenomena, though reinforced, enlarged, and supplemented in-and-by activity prompted in the efferent-apparatus and disturbance occurring in the Sympathetic System, have their origin in the quantification of the Ego-actualising movement in the cerebral cells, since the determining nervous propagations in question primarily originate there. Some thinkers appear to nearly lose sight of this distinction.

But restricting ourselves to the endeavour at a general exposition, we may instance two or three further finally-completing proofs of the above being the common mode of what we may call the explication of Emotion. It is everywhere asserted that women are more liable to excess of passionate excitement than men, and, as everyone will recognise, there is in their sex at once greater elaborateness of systemic-apparatus and less multiformity of efferent-habitude. Then, again, we all, both men and women, bear witness to the fact, that as we obtain command over the efferent-activity in respect to an occasion, any ill Emotion it may at first give abates, and in some cases even transforms into the very opposite feeling. We are only fully amazed in a first occurring instance; familiarity (unless a sense of skill or value, etc., develops out of the activities stirred or the privilege of possession involved) weakens the Emotion associated with a scene, a person, an object, a doing, until indiffer-

ence may follow. In that case a general sluggishness of bodily-activity is notoriously displayed. Novelty is, in fact, the very secret of dissipation ; and, as we earlier hinted, the cause of its temporary success lies in its making a challenge of the Ego-actualising activity inevitable by altering the order, scale, or kind of the sensory impressions; this, in turn, causing abnormal prompting of the efferent-activity and of the systemic-innervation reinforcingly-embodying the Emotional Phenomena ; though, as is very apparent, this points to gradual extinction of those aptitudes altogether, *ennui* being the ultimate result. How this progressive abatement of sentiency is avoided in good, rightly-ordered experience is explained later.

Lastly, what might nearly be called a trivial proof may be given of this reinforcing supplementing-connection between Emotion and a physical embodiment of it,—a proof, however, which is very convincing notwithstanding. Professional actors, and, indeed, all who can practise impersonation with effective versatility, affirm that the assumption of the facial expression, the proper attitudes, and peculiar vocal utterance belonging to a particular Emotion tends to arouse that Emotion. Everybody knows from their commonest experience that it is impossible to laugh broadly and be angry. These facts show the reverse working of the process, and may be said to amount to synthetical demonstration.

§ 3. How Civilisation moderates Emotional-Expression.

It may be well, however, to direct attention to the way in which education in individuals, and Civilisation in communities, both tend to moderate the explicitness of the efferent-activity in this physical expression of the Emotions. Apart, perhaps, from what may be held to be a kind of accidental conventionality made traditional and educational in different nations, giving in some cases exaggerations of control and in others of specific display, there can be no doubt that a progressive lessening of muscular-activity in this embodiment of the feelings accompanies an increase of social intercourse. If, however, any one puts to himself the question,—Does this mean that among civilised men there is a dwindling of the Emotional Sentiency? he would find his judgment begin to cast about for some mitigation of that conclusion.

The increase of knowledge as to the processes of Nature, and a growing perfection of the social bond among men, lessens the violence of some of the ill-feelings in themselves, doing so by giving a surer confidence against danger, and a certainty of help; this implying in a general way a more perfected habituation of wide cerebration, which is less susceptible of surprise and can go on without distracting the Sympathetic Nervous System,—consciousness, in fact, becoming more alternative, and so lessening all

shock. But it would obviously be a disadvantage if emotional-expression so faded and narrowed as not fully to delineate itself in the case of the good feelings and if it failed in its necessary social uses of mutual revelation.

Both these dangers seem to be avoided in a very simple manner. The hugely-explicit activity of the emotional-expression in children and in primitive communities,—in the effectuating of which the whole frame is brought more-or-less into play, is substituted by a complicated, finer facial-expression, and by an elaborated, fully-restrained, diversified management of intonation of voice. In polished society a glance or a tone may fall harder and keener than a blow. There seems, in fact, to be developed the possibility of a more subtle, richer conditioning of emotional-reinforcements by this substitution of the facial and vocal muscles for those of the limbs, in just the same way as we saw a like high stroke of economy in the Intellectual Operations result from the Language-apparatus substituting the full muscular-adjustments for sensating by using *names* for objects.

§ 4. Different Stages of this Conditioning of Emotion.

In the above sections the Emotional Experience dealt with has been mainly that of the lower grade,—viz., the first feelings supervening on the sensations. But it hardly needs adding, after what has been inci-

dentially stated in previous chapters, and again briefly mentioned at the beginning of this one, that, although the Intellect is in the first instance antagonistic to Emotion of this first lower kind, it gives a new higher order of Feelings so soon as its forecasts of causation afford on a larger scale reintegrations of the efferent-activity with its verifying sensory experiences. And, if we rise higher still in the delineation of human consciousness, there are yet superior fields of sentiency,—the ethical and spiritual Emotions; the organic-activities, as before iteratedly insisted upon, then taking on heightenings of symbolism. But these topics belong to a later part of the inquiry, when Will and Conscience have been considered, and the subject of Conduct is fully in hand.

At this point it will be better—leaving the above to stand for a general description of the mode in which the Emotional Experience is executively-conditioned—to pass to the investigation of the Laws of Sensory Beauty, hinted at in the commencement of this chapter as affording an exemplification of the possibilities of the heightening complexity of consciousness even at that first stage of the enrichment of our sentiency.

§ 5. *The First Heightening-Complexity of Sensory Experience.*

It will be remembered that the final consideration

of the question of Sensory Beauty was postponed when inquiring into the Laws of Pleasure and Pain. We then saw that Pleasure, in the primary instances of it, arises whenever an enlargement of kind in consciousness is given by aggregation of identical impression, no matter through what sense or means that be got. Restating the explanation with more of detail, it may be given thus,—Aggregation of identical impression by the activity of a non-interfered-with ratio of peripherally-deriving fibres, implies an easy, large, prosperous agitation of the central-molecules they are connected with, giving the motion conditioning the Ego auspiciously. This is what is meant by Pleasure in its lower style, apart from its delineation in diverse Emotions.

The word Beauty is popularly used in speaking of that mere enlargement of primary sensations; full, perfect examples of specific sounds, colours, tastes, perfumes, etc., are said to be beautiful. Strictly, the name Beauty should be kept for experience of a higher, more compound nature, where there is some conjunction of sense-impressions, challenging not merely Pleasure in its general, vague, rudimentary happenings, but Pleasure in a heightened, specialised-delineation of Emotion, in which, consequently, reminiscence works. It was earlier pointed out that the primary sensations in themselves—apart from modifications of them being signs of causation with

which the Intellect can deal—are not subjects for thought. All primitive, uncompounded sensation, even after the spell for producing it is known, is, so to put it, merely magical; it is an organic enchantment, though one of strict law. We directly experience the single, individual colours of the spectrum, the notes of the gamut, the primary geometrical forms, doing so instantly, entirely: we do not build them up out of mere elements, or recollections, or in any way elaborate them. If they are compound, our nature gives them as unified, as invariable. With the undiversified glory of full red or blue, or the everlastingly sweet sameness of each of the musical notes, or the fixed unwavering lines and curves which, in relation, make the conical figures, reminiscence does not deal. Time has no hold upon them,—repetition in their case counts for no more; they are for us unchangeable, eternal. When they recur, they are identical, rather than like.

In other words, whenever they come back, the Ego finds itself reinstated in just the same actualisation of the lowest grade, enjoying the associated general pleasure, but having no risks of failure beyond those of mere shortcoming in degree, no possibility of connection with ugliness. It is, we repeat, a misuse of the word to call these simple instances beautiful.

§ 6. The Step from the Pleasant to the Beautiful.

But (and it is here that the distinctive step is made from mere Pleasure to Beauty) advance at all beyond that first order of experience, connect the action of the senses, cross them in interplay, meddle in the least degree with pattern, with symmetry, proportion, harmony, that is, bring in executive-causation,—then the greater-and-lesser fulfilments in the past of their complex laws, with all the higher joys and woes arising out of the Intellectual Feelings attending them, instantly begin to flit and ring and glow in the Memory. You now get not only aggregation of identical-experience through a single ratio of a sense, but the senses act inter-associatedly, and you have added the higher, larger aggregation of all the cases of resemblance which Memory can illustratively furnish by any of the cues stirred by any of the impressions. A thing of this second order really is not one, it is many; it sets on foot internally all the neurotic-activity which, having been organised to that type, can at any part fit in with the diagram. It comes not alone, but as an army. The actuality is a little to the front by virtue of its massing Impression, but, crowding in behind and on all hands, presses the thick cohort of reminiscences; all the like-nesses of its kind we ever knew restlessly advancing, retreating, changing place among themselves from

moment to moment, but always there. Whenever Impression, giving easy egoistic-actualisation, fulfils and betters large reminiscence, there is Beauty.

The explanation of the joy is in both cases at bottom the same,—Pleasure arising from economical enlargement of consciousness, got by a good instance of the egoistic diagram: but, in the second order of instances, it is no longer the rustic, homely economy of identical-impression of one ratio of a sense. It is something much higher. For it must be noted that even the areas of the senses used are in every such case used more economically. We have already spoken of the interjuxtaposition of nerve fibres of different ratios in every part of the field of a sense-organ, though some ratios are very likely more massed in some parts of the field than in other parts. In the case of a single monotonous impression of a sense, all the ratios but that one used for the specific experience are passed over. It is an unthrifty use of the organ. During such an act, there still remain in the retinal expanse of the eye, or the auricular chambers, or the intertwined coils of the muscular apparatus, or among the papillæ of touch or taste or smell, all the other unused nervous ratios of the area which is acting, waiting only to be awakened into pattern, into harmony, into symmetry, into any other kind of proportion, if the object only stirred the cues.

Is it not easy to see how all these additions, without effectively interfering with identical aggregations of the first order, may, by the quick turns and involutions of impressional-cues arranged in the relations we name harmony, proportion, etc., enrich with multiform *interior* embellishments the focal point from moment to moment; the diagram including all the possibilities of ratio, each one of them acting as a cue to the countless associations of Memory in every sense to which there run connections; until consciousness suffers an ecstasy from its own delicate complexities, the luxury of the feeling rising higher at each accretion? This, we repeat, is what is meant by Beauty.

In all its striking cases, enlargement of consciousness is thus got in two ways:—

First, by a general stirring of reminiscence through all the cues the impressions of the object appeal to; secondly, by a more economical use of the nervous areas peripherally-impressed by a challenging of the different ratios simultaneously;—in that way giving the largest scope for associated efferent-activities, and at the same time making the most economical use of the energy expended, the *maximum* experience of the special senses being added at every step of the progress.

It will thus be seen that in merely Sensory Beauty consciousness complicates itself in very subtle modes.

§ 7. *Aggregation of Consciousness the Basis of Taste, etc.*

The fact that Beauty, in even its simplest examples, is a sustained elaborate experience, requiring high organisation of interior reminiscent-activities, explains the gradual acquirement and progressive improveability of TASTE. It also accounts alike for there being a supreme universal ideal more-or-less showing itself in man's regard of Nature, where the objects are fixed, and for the endless contradictions of national and local custom in all matters of conventionality, where everything is unstable. Beauty, or that which in any place passes for it, must follow the *aggregation of consciousness*, no matter how it be got; and, if even triviality in the way of Fashion is active enough or massive enough to accumulate réminiscence, it commands Attention and gives Pleasure until it stales.

But, finally, Beauty, in the highest meaning of it, is the name for a perfected instance of sustained, elaborate consciousness, where the Pleasure has no intermixture of Pain; the reparations and accretions of the neurotic-diagram in those cases being made with such absoluteness as to be without any effective disintegrations. The following are the sub-laws to be put forward as leading up to that last golden canon of the perfectly Beautiful:—

§ 8. Sub-Laws Relating to the Beautiful.

I. A thing is beautiful in proportion as, without stultification,—without interfering, that is, with the identity of its class in reminiscence,—it engages a greater number of the senses; one sense necessarily taking a lead.

II. Our apprehension of the beauty increases just in the degree that the associated-activities of the senses the object arouses have been co-ordinated by previous experience; this securing that the senses act with greater coincidence,—that is, with the least interference and distraction of Attention.

III. The thing is beautiful in proportion as the actual current impressions are reinforced, supplemented, perfected by reminiscences of other objects of its class,—in a word, as it fulfils the type of a class.

IV. Anything which has previously been part of a totality which afforded us great pleasure, afterwards when in any way serving as a cue to the general remembrance affects us with the beauty of the totality, which may be far in excess of its own claims to simple beauty.

V. For a like reason of multiform-prompting, whatever by unusual ease, efficiency, range of action, nobility of function, compendiously offers width or intensity of consciousness,—as a bodily feat, authoritative interference by those having great power, the exact

play of machinery, etc.; or anything which sums up in itself a great many relations, and is actually or analogically representative of a number of things the stirring of which in thought constitutes a large expanse of consciousness,—as a mathematical truth, a generalisation of physical science, perception of a moral quality, etc.; also, whatever,—by its being a sign of exhausted, quieted vicissitude, as objects and scenes of past violence, of gentle decay, the spectacle of ripe age, all the dilapidations of buildings or natural objects called the picturesque,—may give great enlargement of consciousness through reference to the past; and, further, anything having natural associations in any way with terror, but which occurs in a way that makes it comparatively harmless, as, for instance, ludicrous acts, grotesque demeanour, etc., occasioning what may be termed illicit-enlargements of consciousness, by partially arousing apprehensions against which we are reassured before they have time to be seriously painful;—each and all of these things we find to be welcome from a mixed pleasure they bring owing to the mass of consciousness they excite, although they are not identifiable with the formally Beautiful, but, in some of the instances, are much opposed to it: there being, indeed, a multitude of cases in which the test is not so much the degree of definitely-assignable pleasure given as the satisfactory disproportion of the pain or

disgust risked compared with the total quantity of consciousness that they stir,—the amusing, the comfortable, the befitting in this way largely eking out the Beautiful.

Also, in cases where the æsthetical development is low, and in matters in which there is not leisure or opportunity for the exercise of Taste where it does exist, the slowly-heaped-up but, at least, bulky co-ordinations of custom, or, on the other hand, the ever freshly-stimulated ones of changing fashion with its public novelty, may, as it were, substitute Beauty; and do so not unprofitably so long as the higher rationalised Taste for it is not constituted, since, in the absence of that, they represent the largest possibility of aggregated-consciousness—no matter how imperfect it may be—which reminiscence can afford.

VI. Further, when once frequency of repetition has fully constituted easy apprehension and complete reminiscence, the charm of what is beautiful is heightened either (1) by its being a rare instance, or the last, that is, one incapable of repetition thenceforward; or (2) if we understand its causes, and have a power of repeating it,—there being alike in both cases, though the kinds are different, an effective association of collateral-consciousness; and (3) the gratification afforded by a thing is increased if it adds to itself a supplementary co-ordination

from what may be termed the *practical* sense,—if it be well-planned, if the leading features are powerfully sustained in a way which means difficulty overcome, if there is adaptation, utility, etc., shown;—all these perceptions, in fact, standing for enlargements of consciousness, which, in turn, become the leading ones, instead of being merely subsidiary, in every case where ornamentation ought to be subordinate to the greater, grosser necessities of common purpose,—plainness becoming neatness, or it may be, elegance.

VII. An extraordinary enlargement of co-ordination by means of one sense will override, and more than make up for, a diminution of possible associated-activity in another sense;—as angular lines in a cut diamond, in the lightning's flash, in expanses of still water, are more beautiful than the flowing line, because they accumulate colour and lustre in excess of compensating their deficiency in form.

VIII. For very striking, noble beauty, not only must one sense take a decided lead, but in that sense the energy aroused must carry activity beyond reminiscence,—as it were, a little past the former understood real, heightening an ideal; for this is the last enlargement of consciousness,—it represents a possibility of a further perfection of things, taking in the future as well as the present and the past, thus giving us *the germ of the Sublime*; the explanation of which does not lie, as has been so often said, in

Terror, but in the apprehension of a greater scale of existence,—swelling, towering higher, sinking deeper. It is a realisation of the old ideal, with something in excess starting a new one; there being always unusual enlargement of activity in some one sense whenever it arises; and the feeling of Sublimity is always experienced when such enlargement of sense-activity takes place.

IX. The laws of harmony which govern the production of the Beautiful in all cases where the effect is compound, will, we believe, be found to resolve themselves into these two principles: 1st, that what are called *complementary* in hues of colour, etc., imply the use of the remaining ratios making up the totality of the fibrils of the nervous area acting, but which are not effectively challenged by the leading hues, etc., themselves; 2nd, that *rhythm*, in all its varied forms,—melody in tune, elegance in form, grace in activity, etc.,—implies the carrying forward from one moment of an impression or exertion to another moment its ratios, which, though not fully in consciousness, are stirred germinally in the last previous stage; so representing economy in constituting partly beforehand the next succeeding increment, it being already in so far, we repeat, existing in advance.

X. In a continued, sustained act of sensation, or a related series of such acts, a certain degree of disintegration of co-ordination, if the details of

it be on a scale sufficiently small not to control Attention wrongly by the pain they give, is advantageous; such minute amounts of pain being more than compensated by the disintegrated fibrils being available for enlarging the co-ordinations that are prosperously fulfilled. For a fibril—owing to every nervous area when acting increasing in value throughout its whole extent at every addition to it, such addition operating as a general increment, every elementary unit in the co-ordination having relations with every other in it, both in the way of impression and reminiscence—counts for more in consciousness on being integrated into a large auspicious grateful emotion of pleasure, than it reckons for the other way as a dilapidation of a small co-ordination which is injured in it.

This explains the use of discords, incongruities, contrasts, within due limits, in all cases where the experience is more than momentary: their use consists in providing extra ratios for instant absorption into the successful co-ordinations, so giving the superior joy of improving, to that extent, upon the stored-up reminiscences. Further, in cases of prolonged impression or effort there will be momentary stages when the occurrence of a partial grouping which by itself would be indifferent, or might give pain, will be welcome, in consequence of its answering to a serial interjuxtaposition of fibrils in exercise.

and, in cases of over-exercise, being useful in retrieving a *strain* of the co-ordination.

XI. Finally, what may be named the golden law of Beauty, earlier hinted at as summing up all the rest, is this,—That the pleasure of its fair examples is without corresponding pain; the loveliness being perfected by multiplied co-ordination, until it is so full of alternative, substitutive reminiscences that its disintegrations are *taken too small* to be amenable to the Law of Effectiveness, giving no uneasiness,—not even making themselves known; the repair of consciousness, and its full enlargement, going on absolutely; a marvellous matter of which we shall have to speak again.

(Two or three of the above generalisations are taken from writers of the last generation.)

The detailed illustration of most of these laws may more conveniently stand over till the chapter on “Art.” But it will still farther help the understanding of the complex way in which the organism can work (which is the great point now being urged) to set forth two of them with a little more particularity here.

§ 9. *The Principle of Association of the Feelings.*

Law IV., in the affirmation that anything which having been part of a totality that afforded us great

pleasure, in afterwards serving as a cue to its remembrance affects us with the beauty of the totality,—which may be far in excess of its own claims to simple beauty,—furnishes the basis on which the striking and, at first sight, puzzling facts of Association in respect of Feeling rest. By it may be explained all the surprising cases which Alison and, prior to him, Hobbes and Abraham Tucker, as, also, James Mill and others subsequently, give of the cumulation of pleasures, with the transfer and attachment of the resulting emotions to objects which, singly regarded, are of little worth. According to this law, the beauty of an object, occasion, scene, is fixed by the total impressions co-ordinated into coherence at the time, inclusive of the reminiscences they awaken, which, again, imply all the consequences they predict;—of this total anything being representative which acts as its cue. In other words, it more-or-less prompts the egoistic-diagram which the object, occasion, or scene constituted.

To say, therefore, that the buzzing of a gnat heard on a still summer day amidst fields and streams is wonderfully telling, but that the sound itself heard elsewhere would be insignificant, is to take the detail of a grouping and consider it singly. So of all this class of remark, viz., that the roar of a lion heard without our knowledge of the power and ferocity of the animal would be unimpressive; or that while the

thunder in the sky is sublime from our coupling it with the flaming bolt, it is, in reality, an uninteresting explosion, as is proved by the rumbling of vehicles being often mistaken for it. In every such example there is the fallacy of separating things which are cues and signs from their necessary connections, and from the memories of their consequences, ignoring the collective-formation of a diagram which on the stirring of any one of its cues tends to recur wholly.

Anyone keeping this law in mind, and remembering how much reminiscence generally overweighs impressions in constituting current consciousness, will have little difficulty in threading his way through the wide field of Emotional Association. He will find all the facts explain themselves when he adds the working of Law X.—dealt with fully in a later place.

§ 10. *Rule for Comparing and Estimating Different Ideals.*

Law XI., it may briefly be said, depends for its fulfilment upon the fine challenges of a superior object or occasion being answered on our part by adequate quickness and complexity of diagram, delicate prehabitutions of use being ready in advance acquired by virtue of large energy and subtle sympathies. That is to say, any one of its best examples constitutes the greatest diversification of experience which in response to the prompting of an object or occasion will cohere with perfect integration ; or,

putting it in another way, the law implies exhaustion of the possibilities of consciousness in the nervous areas in use in the neurotic-diagram by making them fully reminiscent throughout.

A lower ideal and a higher, therefore, have to be estimated by a complex rule; not merely by their standing for the less and greater frequency of a certain impression, but of this qualified by the value of that impression considered as itself representing, and reminiscently offering, a grouping of intercalated acts of Attention, answering to the unstaling diversity of things in themselves, so far as they have it or as we can perceive it in them. Put examples of the Calmuck ideal of beauty and of our own side-by-side; can there be any doubt which represents the greater possibilities of variation in expression of feature, in glance of the eye, in changing tint of complexion, in graceful mode of carriage? *It is in this approach, without failure of coherency and consequent risk of disintegration setting in, to inexhaustibleness of variability—which itself necessarily implies fullest realisation of activity in every present moment—that the claims to superiority in different ideals can alone rest.* Each is best for its own tribe, because people in the formation of the neurotic diagram cannot pass the bounds of their historical reminiscence, but there are higher-and-lower among ideals; the relative rank being decided by the absolute arithmetic of the

possibilities of the objects for reduplicating consciousness.

Try the rule in each case by the obverse examples. Ugliness is always incoherent. It begins, in fact, to be perceived at the point where the examples numerically go, not towards identity of resemblance and of central coherency in the class, but towards the contrary,—that necessarily *implying disintegration of consciousness*, inasmuch as it dilapidates reminiscence, the ugliness deepening down towards hideousness as the incompatibilities increase. For this reason it is that the beautiful seems always to have been partially known to us before, and that ugliness is always special and strange.

Beauty, therefore, ultimately means that triumphant activity in the general workings of things which most prevails,—which oftenest overcomes in tendency.

But is it not clear that this same rule, according to which an impression or exertion in the ratio of its own extent and efficiency multiplies cues of reminiscence at every point, necessarily increases the power of *alternative substitution* of co-ordinations to the degree in which the culture of our experience has been carried? The beholding of a beautiful object is finishingly eked-out, and competitively-repaired at every fractional decay of the impression, from the grand total of our remembrances of its partial agreements with all the previous instances of its class,—

there being no imperfection of our act of observing, no decadence of the impression, which reminiscence does not supply instantly; the disintegrations wrought by it becoming less-and-less in the degree of its perfections, until, when their areas fall below the limits of the Law of Effectiveness, pleasure is kept at the full by irrecognisable perpetual reintegration and enlargement of consciousness, without any admixture of pain. Thus, in the perfectly Beautiful, the world seems fully vindicated: the highest of its laws provides for the triumph of Pleasure over Pain.

That point, however, must not be pressed at this stage. What it is requisite next to consider is the question of the Good; which for man in his present state is a much larger matter than Pleasure. In Conduct a further striking addition to the possibilities of the elaboration of experience is made,—the avoiding of evil, involving recollections of its overcoming, and all the high complexities of what is termed the true and right.

Before proceeding to consider those it seemed well to gain some familiarity with the potentialities of the complicating of experience shown in the simpler cases treated in this chapter.

CHAPTER XI.

THE REALM OF CONDUCT.

§ 1. *Egoistically-referred Activity.*

A MORE intricate higher economy of life now offers, constituted by additions of phenomena which appear to arise within the sphere of the Ego itself. Whether the Ego in an ultimate way effectuates Conduct, or the Ego is itself conditioned by the executive-events to which the name of Conduct is given, is—as has more than once already been recalled—the very cardinal point of debate between the spiritualistic and the materialistic philosophies. But reserving that final point for the next chapter, which inquires into the “Will,” no objection is likely to be made to the manner in which the point is stated above,—namely, that the phenomena of Conduct seemingly arise within the egoistic sphere.

There is with men everywhere a popular persuasion,—even if it is ultimately argued out to be delusive,—that Conduct is in the last resort to be attributed in some way to the Ego. It is easy to apprehend how

that persuasion comes to exist. Man is not placed here merely to behold and feel, passively; activity springs up in the very field of his consciousness,—he is made to believe that he acts at the moment of this activity, and he emotionally experiences all that this involves. Appetites,—that is, tendencies to specific doings recur in, or with, periodic-actualisations of the Ego,—being developed along with the habituation of the organism to a rendering, or obtaining, of sensations, and, as we saw in treating of the Intellect, with its power of interpreting modifications of impression as signs of causation, mental perceptions and conceptions give birth to Emotions, founded on forecasts and reminiscences. As the result, man is instigated to practical Conduct. His experience thus itself becomes causative: for, no sooner do volitions take effect in act, than his deeds become executive-entities, and develope consequences, which react on him.

By a further stroke of supreme effectiveness in this working out of the business of life, man finds himself not solitary but social. In addition to the reality of the world, not only do his own deeds become independent, and go their course, but he is amidst fellows, others of his kind; his behaviour affecting them,—theirs, in turn, always telling upon him. The sexual relations, those of the family, of the community, of the State, of

humanity, are superadded to the primary individual existence; each relationship varying and multiplying experience, every discharge of the duties being productive of results which are afresh causative. By means of the magic of Sympathy,—made more-or-less certain by Emotion having a physical embodiment in an expressional-system of signs, the witnessing of which stirs backward-working cues,—he must even feel, in a way of duplication, his own experience over-and-over again in others, being prompted to action accordingly. Finally, if things go ill, he can imagine that his own and everybody else's behaviour had been different.

This is how arises that world of multifarious human business to which is given the general name of Conduct. All its complexity is got from these simple elements :—

Man's being impelled to act volitionally by appetite and emotion ; the tacking on to each act a consequence,—which makes every doing in some way have reference to the future as well as to the present, and causes the future when it comes to remind us of the past; the arranging that his deeds shall affect others, their behaviour reacting upon him; and, finally, his being gifted with the power of imagining all different. In practice it is found that this is scheme sufficient to make all the doings of life interact in related uses.

In this way we get what may be termed the objective aspect of Conduct, which is not merely private, but indeed becomes most public, for the general progress in Science, Art, etc., which is collectively named Civilisation, implies a common Conduct of a right kind; the basis of it being the fact of an increase and ameliorating of consciousness being made possible by the attaining, through the exercise of the intellectual virtues, a better ordering of the executive-operations, developing new physical potentialities. But Conduct has, besides this objective side, a subjective aspect for each individual, under which the events are more multiform still. For we shall see, when inquiring into the Conscience, that the omission to act is a real occurrence in the world of Conduct, even when we cannot trace any outward practical consequences. But, postponing the higher, more subtle conclusions on that point, we may first pursue the inquiry at a lower stage.

§ 2. Emotions of more Value than Sensations.

Earlier, we pointed out how the Emotions we get from the intellectual calculations of the possibilities of having and not having sensations infinitely transcend in worth to us the sensations themselves. In matters of Conduct this wonderful thrift rises higher at every stage. The sensations are the touchstones to which all must at some nearer-or-

further distance of remove be referable ultimately for verification, but not only are they of little bulk compared with the Emotions so varyingly constituted by the Intellect's forecasting of them, but a great part of the emotional-experience never comes, and need not really come, to these actual sensory tests. True, there must never be contradiction, or a rule of causation being falsified, belief would get a shock. But within that limit, by means of the superior function of the Imagination, our emotional-sentienty takes on a reality of its own far superior to sensations. Our hopes and fears are authentic while they last, whether or not the situations are fulfilled actually in result.

In this mode, man is made most a creature of the future, which becomes to him so inviting, so charming, so dear; outbidding at every moment the present, excepting at bad times, when his higher-actualisation obscures and he fails and sinks. The paradox of his nature, as disclosed in Conduct, is indeed this, that in proportion as he rises, he lives more in the future than in the present; the Emotions at every ascent of the Intellect in its working overwhelming, in more magnificent disproportion, the rude sensations which give them their first pretexts.

In the higher departments of Conduct,—those of the permanent personal relationships,—this process

of subtilisation goes forward until its affairs become indescribably delicate. Not merely is a look between friends—not to speak of lovers—an event, or a word in the family circle a possible catastrophe, but besides all the obligations of common probity and justice, the mere public mind contracts sensitiveness, asking propriety of demeanour toward itself as belonging to right behaviour.

It may be added, with a view to a later branch of the inquiry, that by far the greater part of this imposing superstructure of Emotional Experience is based on the persuasion that the Will gives us optional alternatives of Conduct. If that belief could be practically nullified, both our self-regards and our feelings towards each other must narrow in a way and degree which would cause an enormous dwindling of Emotion; even after allowing for a specific new organisation of feeling arising out of the occasion which would be given for a self-regarding pathos at the change. But this is advancing too fast.

§ 3. We have to avoid Pain as well as to seek Pleasure.

Before pursuing the above considerations farther, let us point out that the cause of the great substantial increase of the business of life,—that which makes Conduct such a steady, continuous, unescapable task,—is the fact of our having to avoid Pain, as

well as to seek Pleasure. It is made imperative that man shall stir to some extent, for, if he was willing to remain quiescent, foregoing enjoyment, Pain would still in one way or another find him out. Thus it comes about, as was mentioned at the close of the last chapter, that, practically, the object of man's life is the Good,—a much larger thing than Pleasure, since it includes, also, the avoidance of Pain, which may have to be effected in ways so roundabout that the avoidance does not, in its turn, afford much direct Pleasure; framing, in fact, the possibility of a great human executive-career, developing the whole realm of ethics; a world of multiform activity arising in a middle region between Pleasure and Pain,—man being left to manufacture satisfactions of a new kind from his own use of means for escaping ills; these means themselves finally most artfully becoming a kind of ends, giving a nobler content than that of mere Pleasure gratuitously granted to man in passivity. But we have not yet fully brought out the intricacy and far-reaching scope of Conduct. Not only have we to avoid discomforts and ill-events which happen directly, but experience discloses in its consequences that at some times pleasures—no matter how much appetite stirs in respect of them—must be foregone, since they lead to pains, or if not to immediate self-suffering on our own part, to wrong results affecting others. There must, also, in

nearly every case be a restraint in the *degree* of indulgence, amounting to a stopping-short in enjoyment, and that for the like practical reasons.

This it is which makes Conduct so large a thing, as well as so subtle; this it is which prevents Pleasure from being the right rule of life,—it can give no guarantee against Pain afterwards. The Good does this so far as it is possible to be done in our case, since its requirements always include the future as well as the present; so organising, as will be shown later, a Conscience having, in more-or-less degree, powers of self-enforcement. Out of this connection of the future and the present, adding the fact that we are social, and, consequently, ever affecting one another, come all the ethical Duties.

It would, however, be a very narrow, as well as a mean, definition of the Good, to say no more of it than that it is the abatement of present gratification in all cases, in view of the future consequence, to the degree which will make the two results, taken together, give the greatest total possible of satisfaction. Every duty may seem to start upon the footing of that strict arithmetical rule, but a splendid gratuitous addition is made to the prudential calculations, that, namely, of the very performance of the duty—by the above-mentioned conversion of means into ends—coming itself, finally, to be the noblest gratification of all, as it records itself in a

man's own character; though this could not be reckoned on beforehand, the thing being unbelievable until it happens. And, on the other hand, much of what has been written on the subject of Hedonism as a standard of ethics is set aside by the fact that many of the motives from which we act cannot be described as a pursuit of Pleasure. The object, as above stated, is often one much humbler,—namely, the shunning of some speciality of Pain, which threatens inevitably if something only a little less painful be not done. It is only later, when this obligation has been widened, and, in the cases admitting of it, been raised into a high duty, that its fulfilment turns into an end, and the gratification of being enabled to succeed ~~executively~~ furnishes peace, with a more active joy subsequently springing out of it.

Man is thus finally relieved from the drudgery of prudence, by Conduct showing, as it goes on rightly, these wonders of unexpected graciousness.

§ 4. *Right Conduct implies Enlargement of the Egoistic-Consciousness.*

The present is not the place for treating in detail of the Virtues and the Vices; something further will be said upon those matters in the chapter on "The Organisation of Experience." What yet remains to be done here is to indicate clearly in what the general process of right Conduct consists. Its final

result is briefly sketched above,—namely, the building up of character in man; an enlargement of the evolutional-activity, and a finer elaboration of self-apprehension. But, stated technically, the process itself involves, in every instance, the enlargement of the central egoistic-diagram to the full,—ensuring that as much as possible of the nervous activity current at any time shall be included within the bounds giving the higher consciousness of personality, and, by consequence, that only the due *minimum* of the activity shall be non-egoistic.

It will be remembered that this most important point was raised when considering the Ego. There it was inferred that the play of the collective-molecules of the brain which actualise the Ego, giving at any and every moment the consciousness of personality then obtaining, is practically demarcated in-and-by the activity of the efferent-nerves. The fact that Virtue hinges upon doing is, consequently, no longer left a mystery. It is only by acting,—by habituating the efferent-nerves in the social relations, and by philanthropic effort in a wide general way in carrying out what we earlier termed the practical requirements of affairs,—that definite enlargement of personality can possibly be got. It is the very business of Conduct to obtain ascendingly-improving egoistic actualisations,—that is, heightened self-identifications of personality; for which end all the æsthetic, ethical,

and spiritual means have to be brought into use,—every other inquiry finally running into this one of private self-awareness. No one will be misled by the word, and confound the enlargement of the egoistic-diagram with selfishness. Every example of the latter means really non-spaciousness of the Ego, a dwindling of all liberal personality; the cerebral-activity becoming more-and-more non-egoistic.

Here we come upon the seat of Conduct; all its business—whether it be finally effectuated, in some way, by the Ego, or whether it really conditions the Ego—is transacted within the egoistic-diagram. There the phenomena of the Will and the Conscience arise, and these must be considered before Conduct can be dealt with in any way of particulars.

One further general technical rule we may, however, suggest as a guide for self-criticism in respect of Conduct. A man may know whether or not the process just spoken of as that of actualising personality is, in his case, improving or degenerating; by noting if the Emotions require larger or smaller sensory-cues. In the latter case he is advancing; in the former he is certainly going backward. This point will be better understood as we proceed. But before dealing further with these matters, it is necessary to try and get a clear notion of the working of Will.

In the later chapter already spoken of,—that of

“The Organisation of Experience,”—something further will be found offered as to the way in which Society becomes an apparatus for the creation, so to speak, of collective-feelings, and the constituting of a public sphere of Conduct. The great enlargement which has taken place recently in the recognition of this set of facts, is very considerably due to the doctrines of Comte; though it must instantly be added, that on this side of the Channel much is due upon that score, as in so many other respects connected with these high matters, to Mr. Herbert Spencer.

CHAPTER XII.

WILL: WHAT IT IMPLIES.

§ 1. Two Meanings of the Term.

THE Will in its first lowest meaning is the popular name for an executive-faculty we have associating physical activity in our muscular-apparatus with a wish to that effect. In a higher significance ascribed to it by some, Will stands for an alleged power of option in reference to Conduct, deciding arbitrarily between opposing motives, out of the exercise of which it is said moral merit and demerit arise. It is to the first-mentioned class of cases we must foremost turn.

§ 2. Practical Relation between Bodily-Movement and Thought.

There is no questioning that a practical relation between Thought and muscular-movement shows itself in us, giving a possibility of executing wishes within the range of our habituation and the circumstantial-limits of the position. If an adult human being wants to stir his finger, the nervous and mus-

cular machinery has but to be perfect, ~~and~~ in thinking the act he does it. In what way the relation is really a causal one is quite another matter. A connection between sensory-consciousness and general bodily-activity following it in a sequential way is, however, radically provided for in our frame: the terminals and originations of the afferent and efferent nerves are so arranged constructively that activity in the former can challenge motion in the latter. (Any work on Physiology will give the details.) In a large mass of operations,—physiological, instinctive, habitual,—a propagation of activity of this related kind is continually occurring at reflex-centres without the Will having anything to do with it,—even without our knowledge of its happening excepting by being impressionally made aware of the consequences.

In fact, for the Will to have any opportunity of operating, this association of seriated-activity must not be directly and unalternatively automatic. In the bodily-processes where it is completely so, volition has no power: if the activity is not wholly and necessarily reflex, the Will can interfere with it proportionately. Those non-directly-reflex cases arise only in the brain, there having to be sensory apprehensions of alternative executive-courses to give the occasion for a volition. It is the determination of the precise way in which the efferent-nerves shall be set in motion or kept acting, or else be restrained,

by this larger cerebral complex-activity, which is the business of a volition. Such determination plainly must imply the working-out of the neurotic-diagram to some practical agreement (not monotonous, but variable with the occasion) among its own constituent-activities, with which process, as we have seen, Thought is associated.

A point of importance to be clearly kept in view is this: That, prior to a volition, the cerebration giving Thought—or, in other words, the brain-activities whose machinery is structurally capable of intergrouping in different patterns—must be going on. In all cases of the merely ordinary executive-volitions determined by the intellectual process, we shall see that the ideatory-activity in a certain manner ceases in order for the volition to occur. But let us go step-by-step.

*§ 3. The Executive-Effectiveness of Volition is
Progressively Acquired.*

Though there is no questioning the fact of there being a possibility of practical relation between Thought and physical-movement, giving a limited possibility of executing our wishes, this power, it has to be added, is not one of immediate original efficacy. Will, apart from our acquiring progressive habituations, has no detailed control over the efferent-machinery; volitions obtain this bit-by-bit, through

blunders and miscarriages of all kinds. It is an easy thing for the adult person, whose frame is physiologically sound, to stir the finger at will; the infant has to acquire the ability most laboriously, very slowly.

The mode has been previously hinted at. Our success in getting this non-original power of volitional control over the bodily-apparatus, in accordance with intellectual judgments founded on sensory signs, wholly hinges upon the fact of repair taking effect in pursuance of use, and so predisposing structure to repetitive-activity, answering to its largest, most favourable, prior exercises. Going a little more into detail, the point may be stated thus:—

Non-fulfilment in Impression of previously-organised nervous co-ordinations by an imperfect repetition,—which we have seen gives Pain,—necessarily disturbs the static neurotic-conditions, so causing hap-hazard motion; while the larger effectiveness of nutrition during the right, full adjustment to things, —which increased co-ordination constitutes Pleasure, —favours a predisposition of structure suited to the related activity; the restlessness which, owing to statical-instability being produced, exists when there is Pain becoming practically effective as activity upon hitting one of these predispositions of structure.

Let us try to understand in a more detailed

way the manner in which habituation of activity comes about, choosing the simplest cases, where the volitions are of the rude kinds admitting of direct observation,—the acquirements of mere bodily-dexterities.

It is clear that we cannot immediately think the directing of the activity, for there is no awareness in our consciousness of the physiological-arrangements of the system;—where the junctions of the particular efferent-nerves needed to act in a given case are we do not know, nor anything of the nervous currents, etc. All that happens on the wish first occurring is the beginning of an aim towards controlling the activity in a way of guess-work, by means of the suggestions of concomitant-impressions associated with some more primary volitions; and, as these occur, they set on foot more-and-more of the previously acquired volitional-movements, which lead from stage-to-stage (often by very circuitous ways indeed, and through many miscarriages) in the direction of the result desired; repetitions again-and-again being essayed as the guiding impressional-signs begin to be perceived efficiently by the Intellect. A new acquirement of disciplined-activity amenable to volition is, consequently, a bit of specifically-modified structure, added on to the previous habituations in reference to which concomitant impressional-signs were already known to the Intellect.

To put it in other words, an effective volition in these lowest cases implies a neurotic-diagram so framed by structural-habituation of the apparatus, that on certain sensory-impressions appearing in it,—or calculations founded on them by the Intellect being gone through,—they are followed by a discharge of the nervous activity in the efferent-machinery.

But the question still remains,—How is it that the Intellect's perceiving the impressional-signs, or dealing with their symbols, comes to be practically the signal for the discharge of energy in the efferent-machinery?

§ 4. In the Lower Order of Volitions Ideation Stops.

A hint as to the mode has been given before. The neurotic-diagram conditioning the intellectual consciousness, having carried its elaboration so far as the occasion challenges it, or the habituations of the efferent-machinery giving intellectual sentiency (see chapter on “The Intellect”) have been acquired in reference to the challenge, necessarily completes itself,—the ideatory-cerebralising stops, and its cessation of further intergrouping centrally, at the very instant when the ideation arrests, reverses the line of the propagation of motion; being followed by activity in the efferent-nerves as they are set at that momentary pattern of adjustment by the cues of

the peripherally-impressed afferent fibres. In other words, volition not only requires that the cerebration giving Thought should, as above stated, be going on prior to itself stirring, but it implies, in order to its taking place, the cessation of progress in thinking in reference to the particular matter;—it must be so for the apparatus to be left free peripherally for observing the result.

Can there be any doubt that the above is, in these first lower cases, the actual process of the Will? Do we not, in order to think, draw ourselves inward, diminishing movement externally, until, in cases of concentrated thought, we become quite still bodily? On the other hand, ask a marksman, and he will tell you that, in taking aim under circumstances asking calculation, he is aware of the judgment ending its process, and a blank in ideation in some part of the brain occurring at the instant the volition becomes actual. Just so, a man who has done anything under stress of passion states that at the time Thought had obscured. Consciousness in these cases always witnesses to the momentary arrest of cerebral-activity in some other form when that of volition occurs; though the physical results of the volition—even the use of the frame in carrying it out—give necessarily new impressional-experience thence arising, instantly supplying other ideation.

Everybody is aware how, in proportion as an act

becomes habitual, its doing vanishes out of consciousness. As we gradually acquire physical-dexterities, we can detect an answering diminution of thinking in the process, until finally, when the movements become perfect, Thought is blank respecting them. What answers to Instinct is constituted. The suggestion naturally offers that in all these cases the activity becomes reflex. But the validity of the reasoning is preserved by the fact, that, a habitual acquirement may be more-or-less nullified by recurrence of Thought about its process.

§ 5. *In the Higher Matters of Conduct the above Rule is precisely Reversed.*

The effects we assign to volition are got, then, in two great modes, one of which may be called positive, the other negative,—efferent-activity is suspended while ideation in reference to it is going on, and ideation in so far ceases for the efferent-activity to operate.

But the statement that volitional-activity ensues on the cessation of so much activity in ideation, though it is strictly true in reference to the lowest rude habituations of physical-movement, is really an inversion of the mode as it holds of the higher questions of Conduct,—that is, in the cases to which the second, higher meaning of the term Will is applied. In the moral behaviour it is thinking taking place,—ideation

being pushed further, which suspends the progress of the energy aroused by sensory-experience from passing on in its direct course to its habituated efferent-activity, fulfilling the merely instinctive or passionate impulses. In fact, if by the interposition of larger thinking, that is, of larger cerebralising, the energy was not detained in the brain, and, so to speak, used up there in actualising occasions of more elaborate, better intellectual consciousness, what possibility would there be of ameliorating the Passions?

It follows from this that a very great part of the phenomena commonly attributed to the Will are not volitions at all, in any strict use of the word. They are simply automatic-activities of the energy, taking effect naturally the instant that Thought fails, or ensuing directly where thinking does not take place at all. All the activity arising out of the Passions gets its explanation in this way: it is doing effected by the energy working itself out at a low instinctive level, giving mere habitual repetition, Thought not having varied it. In the high sense, Will can only refer to the enlargement of our process,—once that enlargement becomes habitual, the Will is no longer in question.

The fact that every improvement in Conduct can be traced back to refraining, abstaining,—that is, to ceasing to do something which before there was a habitual tendency to doing, is of the highest importance. At a later stage there follows a positive

activity, but that can, according to the above views, only ensue from an enlarged ideatory-pattern occurring and completing. We will return to that point directly, but the fact needing to be insisted upon now is that cerebration has to be in current exercise to its fullest hitherto-attained limits for the framing of an occasion for a volition in this high, ultimate meaning.

This mode of stating the case really means, as will be shown in the next chapter more particularly, that at these critical moments the Conscience is acting.

§ 6. "*Aspiration*" a *Mystical Egoistic-Phenomenon.*

In fact, the perplexity of the inquiry into Will arises at this point. If investigation is to go further, to be carried into that alleged higher region, the mechanical notion of volition has here to be changed for another,—one which, using the most attenuated word which offers as an approximate name, *may* be provisionally spoken of as aspiration,—which takes on the aspect of an egoistic-phenomenon; the only explanation of the possibility of it being that it arises from a mystical complex self-feeling which supervenes at these times of full use of structure. One thing appears to be certain, that at this moment, when contrariety of motive breaks up the habituated-cerebration, the Ego is most vivid, and gets a persuasion

that it decides arbitrarily. It is very reasonable that everybody should insist upon all the explication being given here that can be given ; but who can hope publicly to make quite intelligible such private matters ? All that can be done is to cast about for hints.

Is there anything in what may be called the general style of the egoistic-experience favouring this manner of phenomenon ? First of all it may be recalled that the modern doctrine of Relativity ascribes even to the sensory-experience a duplication of consciousness. To have the feeling of heat, it is said, we must before have experienced cold, and must, in some way, egoistically mix with the current experience of temperature reminiscence of the contrasting feeling. So of sweetness and bitterness, and all the other sensory cases. The very same thing, we have seen, happens with the Intellect throughout its whole range. In all its experience a kind of duplicatedness is exhibited : we only know one thing intellectually by defining it off from another. All ideas in its categories stand in opposite relation. To speak of inner implies outer ; black supposes white ; north requires south to be understood as existing ; for father there must be son ; the State cannot be without individuals.

When inquiring into Memory, we found that in remembering there is a specific duality of consciousness just the same in kind. In every such experience there is a mixed awareness of the present impressional-

situation and of a situation, or a part of one, that is past. So, too, of the Emotional Sentiency, which clearly shows in every case where there is enough of elaboration to make it distinctly appear that there is remembrance and forecast. It follows of necessity, that in the final realm of experience, the spiritual, a like style of phenomena may be looked for,—its consciousness is the most complicated, the most inter-referable of all. In this ultimate sphere we have seen that all the sensory-experience is heighteningly-translated into metaphor,—an egoistic reconstruing of consciousness, apprehending a double meaning in all the primary phenomena.

The question to be kept distinctly before the attention is, how a cumulatory neurotic-diagram, getting increase of efficiency by mere addition of coalescible units of physical-activity, can give this duplicity in the egoistic-actualisation? It must be borne in mind, that for every impression there has to be conditioning-activity in the current neurotic-diagram, and, also, that there has to occur some reintegration of the cerebral-dynamics at a higher stage, by means of a wider general neurotic-activity developing, in order for sentiency to be raised to the metaphorical style. But alongside these broad disclosures of scientific research as to the nervous system, we, in each and every department into which this inquiry has been pursued in the previous chapters,

found it obligatory to speak of "an egoistic complication" having to be recognised as giving effect to the cerebral-dynamics in a way of unification.

In fact, the question here arises, does it not suggest itself as the only approach to intelligibility in the case, that the Ego in its primary mode is mystical from first to last? In other words, that its proper self-awareness requires and exemplifies this duplicity in mode, though for some reason of historical forfeiture in the past, or of only rudimentary evolution in the present, the prerogative of personality in this way borne witness to in every egoistic-actualisation has no direct efficacy in reacting on the Executive System conditioning its actualisations, but only itself dimly subsists in self-awareness during those occasions?

That the egoistic-process should itself be dim, an indeed enigmatic, exactly agrees with the assumption of man now—for either of the above reason—existing in a state of large incapacitation. The utmost, however, that can be hoped from making the investigation exhaust its possibilities by taking this turn is, as we phrased it above, the seeing if there is anything in the egoistic-experience generally—when its process is fundamentally scrutinised—which lends itself in *style* to the notion of this alleged mystical "aspiration."

Stating the case as plainly as possible, what the notion seems to point to is this,—that the Ego, by

sort of mimicry of prerogative if not really possessing an imperial faculty, has ultimately, when fully actualised up to the limits of the conditioning-structure, a germinal power of self-determination arbitrarily. This is inconceivable without the Ego having, somehow, duplicity in its function,—and the question, we repeat, is, whether any hints are otherwise given of this being its style of process? The only reply which seems to be possible is, that if the above statement of the facts of our general experience is correct, then it appears to be intimated by sensory, intellectual, and emotional Relativity alike, that this manner of duplicatedness, complexity, and inter-reference characterises the egoistic-phenomena from first to last. This is the point to which a return was promised earlier.

Finally, let us add, that all our ideas of the mode of the efferent-activity itself, as was urged at the very beginning of this treatise, are ultimately self-stultificatory as included in the conception of Motion: all that this conception really does being to explicate practically certain defects on our part, not the process of the Executive System itself. The physical node has, in the last resort, to be avowed a mystery; and though it is proved that man has no power over the material system, there is the fact of its process being a mystery to be instanced as a kind of vague suggestion that such a phenomenon as this of alleged aspiration is not barred out of the possible hypo-

theses on the score of being flatly in opposition to the whole manner and mode of things.

At any rate, this seems all that can here be urged. Such further general elucidation as is possible of the alleged mystical-process must be left to develope incidentally in the subsequent sections.

§ 7. *It is Affirmed that "Aspiration" is followed by Increase of Energy.*

Now we take the critical step in the inquiry. The affirmation made by all the men in whom experience has risen highest,—that is, those in whom the process of it has been notably enlarged,—is startling⁹. They say that if when this full limit of the use of structure is reached there be “aspiration” in the Ego, a law, or a Force, comes into play by which a positive increase of physical energy is given. Here we, at last, touch the vital point of the inquiry: Will, if the term is made to cover the possibility of altering our dynamical-activity optionally in Conduct, necessitates modification of structure, and this inevitably implies additions to the sum-total of physical energy.

Obviously, this appears to remit the question of Will to the mathematicians for ultimate solution. If energy is continually being introduced in this way into the mundane-system, how is it that they have not come upon the track of such additions? It is a matter to be scrutinised very closely.

§ 8. Probable Size of the Alleged Increment and its Frequency.

The first thing, by way of preliminary, is to try to form some notion of the size, so to speak, of the alleged increments and to try to reach some conclusion as to their frequency.

There may have been a time when so far as the point was held in thought at all, the vulgar notion was that the Will gave all the force which is witnessed in the ultimate physical-movements answering to volitions. The most ignorant now could scarcely make this mistake. It is known that the human body is an apparatus which multiplies its use and discharge of force at each stage of the progress of its activity through the whole train of it. Each nervous-centre may be likened to a loaded gun, which a spark is enough to discharge: while it must always be borne in mind that Will, as has been earlier mentioned, does not act as an isolated faculty, stirring immediately, throwing the frame from perfect quietude into motion. General consciousness is a much larger affair than volitions; these are only one kind of the incidents in it; and the motion affording the larger experience must exist in the brain before the possibility of our exercising Will can arise. There must first be cerebral-activity, either purely reminiscent, or partly that and partly peripheral-impression, in respect of the objects, or occasions, about which the volitions occur.

The increments of energy we are considering would, therefore, have to be strictly and merely additions. If we go back to the illustration used above, the bulk of motion visible in the stirring of a limb, or even of a finger, in pursuance of a volition, may compare with the initial cerebral-stage where Will is thought to act, in just the same way as the diminutive spark at the touch-hole of the gun compares with the roaring flame issuing from its mouth. It is rather an addition to the spark which is in question than the production of all the violence and noise of the resulting explosion. But something further has yet to be added in the way of preliminary explanation.

In considering the process of Will proper, we found that moral progress consists primarily in the suspension, postponement, evasion of instinctive or habitual executive-activity; this being attained by the interposing and lengthening of the ideatory-process. But that obviously can only be secured by enlargement of the neurotic-diagram. The increments of energy spoken of have, consequently, in the first place to be looked for in *elaboration of cerebral structure* rather than in immediate addition to the external activity.

But it has necessarily to be asked, how is the added energy distributed so as to alter the pattern of the neurotic-diagram? In the chapter on "The Neurotic Diagram" it was sought to be explained how it is

fluctuatingly reconstituted from moment-to-moment, and, further, that any and every accretion alters the significance of the diagram in consciousness totally. Moreover, it must be kept always in mind, as has just been specially urged, that at the moment of experience when these high phenomena of Conscience and Will develope, the cerebral-apparatus is acting in its most complicated style,—previously acquired structure is in full exercise of use. It would, therefore, according to those views, be not unlikely that a single vibration added, affecting only the centre of the diagram in a single brain-cell, might be sufficient to carry the struggling generalisation of virtuous thinking further than heretofore; though the improvement of structure might have to be finished and made stable under the tests of varying situations by the repeated and progressive overcomings of Temptation through again-and-again aspiring rightly, followed, or accompanied, by fresh impartations of energy.

A logical tracing out of the hypothesis suggests that, on the other hand, if the right options be not in this way followed up, all the dangers of deterioration of character set in; it being possible, owing to instability of structure having been introduced, for the second state of the man to be worse than the first. A failure to aspire rightly on the next occasion, in this way coming practically to have what is equivalent to a physical effect, for which a man's Conscience

challenges him with responsibility on the ill act subsequently arising in consequence.

How a thrifty opportunity would thus be given for the multiplication of the emotional-business of the human heart, and especially for higher spiritual feelings of penitence, content, etc., is apparent. That, however, is not the point in consideration at this stage.

§ 9. Conclusions to which the above Reasoning seems to Point.

The conclusions to which the above reasoning seems to point are these:—

First, that allowing for the natural stimulation of the vital processes by gratuitous addition of energy, and taking into account all the provisions of the bodily-frame for reduplicating the discharge of nervous-force at every stage throughout its whole train, the added increments of energy required to give physical effect to mystical aspiration, if such a phenomenon validates itself by eliciting an actually-operative response, would need but to be infinitesimal in size or quantity.

Secondly, owing to its being requisite for an occasion of willing in this high sense, that the Conscience shall be fully acting, the utmost of previously-acquired structure being in its most complicated use ideatorily, the occasions for such additions numerically regarded are very few,—structure as

last previously organised being left in the large intervals between to work out its own results; the ordinary practical determinations of Conduct which arise from the instinctive and habitual executive-activities coming into play at the point where ideation suspends, not being volitions at all in the ultimate sense, but the necessary operating of structure.

Thirdly, man's responsibility for those executive activities, however, may be considered as morally fixed, notwithstanding, in a qualified net kind of way by the manner and degree in which he aspired on prior critical occasions.

In the last fact, if it were made out, would be furnished the opening for pity, alike the human and that of all the divinities there are, and for all the romance, the amazing surprises, of the moral experience.

§ 10. *There is Partially-Calculable Repetition of Behaviour between the Willings.*

If the final options were exercised actually at each moment of life, there would be no certainty in social doings. Such a notion of Free Will at once shows absurdity. The scheme of this world being social, it must provide for a *minimum* degree of forecast on the ground of more-or-less calculable repetitions of behaviour. If we intimately know a man's structure as disclosed by past Conduct, we can in a rough, general way predict his decisions, excepting at one

of these alleged supreme moments. Then, on the above hypothesis, we are liable to be utterly wrong for when a supernatural act of gratuitous addition to structure is taking place, who may limit the miracles of change of character that may occur?

§ 11. Further Consideration of the Mathematical Problem.

But the strictly logical argument is not yet concluded. It will occur to everybody, that, no matter how the gratuitous-increments of energy be reduced in size, and no matter how the occasions be abated numerically in respect of frequency, yet multiplied by the total of human beings and the average duration of individual existence,—in both these respects taking in not only those men now living, but those that have existed on the earth,—the collective-sum of the additional energy introduced into the mundane-system cannot be insignificant. How is it, it may be fairly asked, that there is no mathematical trace of this addition? It is true that the calculus is at present far from perfect, so that the mere matter-of-fact of whether or not there is a slight accumulatory increase of energy going on, the effect of it being masked more-or-less by its only giving retardation of a naturally progressive slackening of the Solar System, is not so easily decidable as might at first sight appear. If there be such addition, it is pretty certain that in the end, unless some special provision

in the mundane-scheme prevents its discovery, the mathematicians will come upon its track. But it must be borne in mind, that it is fairly open to those who affirm a supreme personal arranger of things to say that, for considerations arising out of the higher emotional-experience, it may be part of the plan that the mathematicians shall be baffled; such a rude easy proof as a quantitative demonstration would be when it was once got, not being fine enough as a test of delicate belief for founding the most subtle of the higher feelings.

For the above statement of the question as a possible mathematical problem, leaves altogether out of the account that *it is possible for energy to be subtracted from the mundane-materialisation as well as supplied, and that in exactly balancing quantities.* If, for example, the life of man be prolonged after this state, and, by a natural happening which is part of the physical-arrangements, he is transferred elsewhere; and if for the conditioning and apportioning of his experience in a certain way, it be necessary that each individual should, when quitting this part of the cosmical system, take with him some germinal organisation,—then, the precise difficulty arises in the exactly contrary way. In that case, it is palpable that energy is being withdrawn from the mundane-system, the subtraction having been going on during all the ages since man appeared on the earth, and

that the mathematicians have not detected it. On the other hand, is it open for anyone to say that it is *impossible* for the germinal organisation which may be removable, to be precisely determined by the “aspirations” exercised in this life, that is, by the gratuitous increments of energy granted on good options being made in the duplicated consciousness of the full egoistic-experience,—the energy withdrawn at death in this way of structure, being exactly compensated by the effects of the exercise of the additions during the mortal earthly life?

At any rate, this much must be said, that, if the doctrine of a future life for man elsewhere be supposed to imply the removal from this world of anything whatever in the way of organisation, it is (unless the present mathematical calculus is too imperfect for dealing with quantities so fine) open to physical disproof, in the absence of some complementary doctrine of Will suggesting additions of energy equivalent to the force so withdrawn. If such equivalency should be matter-of-fact, it reduces the play of mathematics in the case to a dealing with the special differential results which may be found connectable with the varying numbers of human beings in the world at comparable periods. No one for a moment supposes that these data have been collected, or that the human intellect now has any such powers, either of calculating or inferring.

Let it be understood that, in this hypothesis, it is supposed that the removal of the germinal-apparatus at death is—no matter how subtle may be the organisation, or indeed, rather, the means of removing must be held to arise out of that subtlety—a physical event taking place by a natural process, duly provided for in the material scheme, a law to that effect obtaining expressly, just as in the radiation of heat.

In a later chapter on “The Soul,” some reasons will be given, making out that, if man must ever have the enfranchisement of the wider cosmical distances and more rapid elemental forces, which Modern Science discloses as actually existing in the physical universe, some such etherialisation of his embodiment is strictly requisite.

§ 12. The Evidence Supplied by Consciousness.

The matter must so be left. At this stage of man’s mental history, no mathematical proof either way is possible. We are thrown back upon the deliverances of our own consciousness, and of the testimony of others, subject to such criticism as rationally arises. It is circumstantially true, as is above stated, that men of all ages, now as well as previously, in whom human experience develops highly and complicatedly, avouch that, in accordance with aspiration, they have an awareness

of this impartation of added energy, affecting the physical-actualisation of Conduct. Logically, the statement fits in with their other asserted persuasion of a future life, something of the kind seeming to be necessary to make that event feasible.

But the common, ordinary consciousness of everyone offers a lower kind of witness than this, namely, an unescapable persuasion that the determination of our physical-activity in all the non-automatic cases is under egoistic control. No amount of scientific-habituuation in his thinking enables a man during the process of activity to divest himself of that conviction, alike in reference to his own operating and that of others in daily life. That there is illusion here cannot be doubted, for all scientific reasoning is against the assumption that man, as he now exists, has any immediate and direct power of affecting the executive-order which affords the occasions of his sensations, without that executive-order itself coming into play in some adaptation of structure giving a naturally-arising interquantification of motion. But, on the other hand, nothing is more certain than that this illusory persuasion has a causative validity in the emotional-realm, and that its destruction would, as hinted in a prior place, withdraw the basis of nearly all that higher, priceless experience. Is there any way of escaping from intellectual stultification here?

If, for instance, it could be made out that, owing to modifications of structure being obtainable through mystical aspiration, the state of our structuralisation at any moment is virtually our own doing, though not actually so, how far would that be explanatory of the feeling? Further, if we are to take into the reasoning all possible alternatives, in what other way is it conceivable that there could be kept alive the tradition of an earlier racial-stage, such as that affirmed in the Christian dogmatics, when the human creature had powers which it has not now? If any such dwindling, mentally and morally, of man's actualisation has really taken place, the circumstance of his suffering an illusion is not a real arraignment of the truth of the system of the world,—it is the very phenomenon which the nature of the case requires should arise. Man's discovery of the illusion would, in fact, be one of the necessary great achievements of his progress.

Indeed, at this stage, what we have just been saying of the deliverance of human consciousness as to man's physical-effectiveness has to receive a most significant qualification. It is true that the religious man and the scientific inquirer—begging the antithesis for the moment—are alike subject to the illusion of fancying that they directly create energy egoistically when acting bodily; but it is also true that the religionists, by a direct apprehension in some way got as part of

their experience, discovered that this persuasion was illusory long prior to the modern scientists reasoning it out on mathematical grounds. The ancient pre-Christian moralists among the Greeks and Romans show a partial awareness of their lack of physical-operativeness in effectuating good-intention in behaviour; but no sooner do you reach the Christian teachers than you find the conviction fully formulated. Passages from St. Paul and others of the very earliest New Testament writers will at once occur to the reader. The Fathers make the view a kind of commonplace in their expositions,—Origen, for instance, stating it as broadly as any physical philosopher of to-day would do. The distinction between the two classes of thinkers is, that the physicist leaves the persuasion of man's executive-arbitrarness in the moment of bodily-activity a pure illusion; while the religionist, by the bringing in of this added conception of mystical aspiration, does really seem to save himself from the mental stultification threatened in the case; finding, as he alleges, his experience make itself privately intelligible in a conviction that in this way his bodily doings are his virtually, though not immediately,—the illusory persuasion of immediate-effectiveness bearing witness to the race having once had in this respect a larger faculty.

The vital point is, the possibility of understanding that a man's structuralisation may be of his own

determining *virtually* by this so-called mystical aspiration. Let part of the above comments, offered in a way of criticism, be put out of recollection for an instant, while we return to the question of the evidence of consciousness: we shall thus see whether any basis frames itself for these alleged mystical phenomena.

Though in the instant of physical-activity we believe in our operative-effectiveness, in the internal determinations of Conduct we all in some degree recognise struggles of Temptation, conflicts of Conscience. It is an admitted fact, that human experience witnesses to this internal contention. But it will be better to take up the thread of the argument as far back as may be.

The word MOTIVE has played a great part in the historic controversy of the Will. It is obvious that there would be no opportunity for volition in any mystical style if appetite, opportunity, suggestion, did not operate dynamically. According to the views stated above, our existing structuralisation necessarily has executive-tendencies, acting in pursuance of the promptings the apparatus gets. Moreover, the neurotic-diagrams framed in Conduct being so subtle and intricate, it follows that there may be much fluctuation and interaction ideatorily before the efferent-operation finally determines itself. The problem is how this sets up a struggle in the very consciousness which it conditions. It must be remembered, that, so far

from the egoistic-actualisation being weak and obscure during this conflict of conditioning-activities, it is highly-emotionalised, taking note, so to speak, of the violence, and suffering from it; though Science assures us that at every moment of the cerebral-phenomena there is, taking into account both statics and dynamics, strict equilibrium of the physical-equation,—the swaying of Motives, regarded only under their aspect of physical-activities, being but the progressive-effectuating of that equation. These broad facts of themselves suggest that by Motives something more than appetites must be meant. A struggle during a case of Temptation, whether successful or unsuccessful under what is termed its moral aspect, is not in our consciousness merely a quantitative actualising or affecting of the Ego to the precise proportionate value of each operating Motive. Pain appears as an added phenomenon, the Conscience arousing; it does so, as we shall see in the next chapter, owing to a higher emotional-experience which is framed having a validity so far as feeling goes without necessarily starting effective executive-operations. In this way the word Motive comes to have a second higher significance, distinguishing it from appetite, or direct solicitation of opportunity. Prospective pleasures and pains, in vistas reaching as far as the Intellectual Apprehensions can prompt the Imagination, become considerations offered to the

Ego in a logic of the Emotions. It is in reference to this higher grade of Motives—not to the mere appetites—that the struggle of Temptation arises ; indeed, unless the cerebration has assumed this sublimated style that special phenomenon does not offer. Further, the old moralists, when speaking of man as being made a “rational” or a “reasonable” being, meant that he had the power of taking note of these consequences made, in the working of the Scheme of Things, to follow upon Conduct; but that he, further, had an arbitrary faculty for yielding or not yielding to their instruction of his Intellect. That was what they supposed Will meant in the ultimate region of its exercise, and, as is above urged, it logically implies that the human being had at some earlier stage a real creative faculty, though afterwards Will dwindled to a mystical validity only.

The fact of importance in this present attempt to trace more in keeping with modern scientific methods the evidence supplied in consciousness, is this, that the play of the higher motives with which the struggle of Temptation and the occasions for the alleged arbitrary volitions arise, can be seen to bring into activity more-and-more widely the existing structuralisation. The very conflict arises and progresses along with extended ideation and the further stirring of sympathies in respect of some particular matter, and it is affirmed to be the witness of experience in the

bulk of men that the egoistic-actualisation at such a moment of full activity of structure regains a mimicry of arbitrary power,—that it can then depart radically from the executive-activity of the primarily conditioning apparatus, and may, owing to the essential mode of the Ego so enabling it, decide in a mystical way contrarily to the bodily-acts, though physically impotent to give effect to the aspiration. The man becomes an observer of his own apparatus, and may egoistically protest against its doings. It is, in fact, at just this point that the Christian alleges that he becomes aware of a Power outside his own actualisation coming to his aid in a manner which discloses to him that a Person is dealing with him. The argumentative issue, of course, is whether in this he is mistaking a naturally-arising perfecting of his organisation by its evolving a finer intricacy of physical-operation for an extra-arriving and gratuitously-conceded increment of energy? To this final question we will return at the end of this chapter; but that in one or other of these alternative ways great sudden ameliorations of character take place, no one doubts; the subsequent Conduct showing that there must have been very striking modifications of actualising-structure. In whichever mode this functional change occurs, it seems to be made out by the reasoning in a previous section that the moment of full use of the already-organised apparatus is the one when least

addition of structure would, if rightly happening, be required to affect the organisation to that result.

However, we have not yet finished the account of the evidence supplied in consciousness. The men who in a special manner show these possible changes of Conduct affirm that while in their experience they grow more-and-more familiar with them, the stronger grows their persuasion of Will, in this highest meaning of it, being mystical only; but they also, with increasing emphasis, add, that repetition of this physically-inoperative aspiration is somehow by power from without caused practically to decide the struggle of Temptation,—the efferent-activity being made progressively to correspond with the higher emotional-actualisation. By this means, they affirm, is gained all progress in what, in the ordinary experience, is popularly spoken of as freedom of the Will. In a subsequent chapter on “The Organisation of Experience” the matter is treated in some detail, but it may be briefly said here, that this process, which, in the Christian terminology, is named Sanctification, and is referred to the Holy Spirit, must mean, in modern scientific phrase, the perfecting of structure with an increasing versatility of egoistic-actualisation resulting from it. It is easy to see, that, if the alleged impartations of added energy,—whether naturally arising or bestowed by grace on right mystical choices being made in the Conscience,—have improved the

neurotic-apparatus actualising the Ego, there must be prompter, more decisive, clearer, as well as more elaborate, definitions of personality. This amelioration of character is, in fact, conceivable as going on till there is so perfect an alternative adaptability of impulse to the right requirements of occasions that the egoistic play becomes exact and full. But this improvement should be called better efficiency of volitional-activity rather than increased freedom of the Will.

§ 13. *In What Way, then, is Man Accountable for his Conduct?*

From all these remarks it will be gathered that, if any one should, from what was earlier said as to lack of egoistic control over the executive-order of the physical activity, have hastily concluded that it settled the question whether men can have any responsibility for the doings occurring in their Conduct, it would show that he failed to apprehend the possibilities of subtle complexity in human experience. He would, in fact, have altogether missed the point to which we now turn,—namely, the *extent* to which it is hypothetically possible for man to be virtually responsible for his structuralisation, even though he has no direct power over the bodily executive-activities.

In § 9 of this chapter, it was mentioned that a failure to aspire rightly in the mystical field

of the Ego a second time, for the purpose of getting a completing of the prior partial improvement of structure, comes, according to that hypothesis, practically to have *what is equivalent to a physical effect*, in respect of which a man's Conscience challenges him with responsibility, arraigning him for the ill act happening in consequence. The manner in which the Intellect comes into play in these affairs of Conduct, and definitely instructs the Conscience, must not be overlooked.

One can indeed see that the alleged aspiration may in this way become perfectly articulate. A man is in a multitude of cases able precisely to foresee the working of unimproved or deteriorating structure. The Christian states that he knows positively, that, if by means of mystical aspiration, alterations of structure are not obtained, certain specific acts will follow on special occasions recurring. The executive-activity is not left an event of blind darkness as to which man is wholly passive and ignorant. In practice definite courses can be summed up in Duties to which set names are given, and a man is held responsible by his fellows—after certain reasonable qualifications relating to inherited organisation, education, etc., have been made—for the possession or non-possession of the structural-adaptations for performing those Duties. For practical reasons, Society in all matters of

jurisprudence, and in most matters of usage, has to hold adult sane persons formally accountable for their particular acts; though, we repeat, everybody recognises the need for mitigations of this absoluteness by a wise moderate administration. A distinction, too, is made by all moralists between sins and crimes. In the case, however, of an adult person, whose Intellect has become fully cognisant of the precise results alike of specific-structuralisation and the want of it, there is, under the above view, a practical justification for holding him accountable for his physical-activity.

On the other hand, the Christian doctrine of grace would, indeed, seem to require a more detailed exposition on some of these points than it has hitherto had. There appears, for instance, to be agreement of testimony that a certain earliness in the aspiration is needed for it to be timely effective in altering physical-activity; and it seems proved that a prospective determining of inclination, pointing generally towards a line of activity prescribed by a recognised duty, is operative if it habitually recurs, even a very low degree of intensity availing. The Christian beliefs of the co-operation of the Holy Spirit, the efficacy of Prayer, etc., in this way afford an alleged practical apparatus for the higher Conduct. But these are points which can be better considered when dealing with "The Organisation of Conduct."

§ 14. Covert as well as Overt Conduct.

Further, let us point out, that it is making the higher experience too coarse to treat of the phenomena of Will only as practical volitions, taking effect in overt Conduct. Our outward occasions are so far from numerically adequate, our modes and processes of action are so slow, that the emotional-business of life is many times over in amount that of the practical behaviour; nor do the latter's rude activities strictly represent the fine, delicate, often-times operatively-ineffective choices we make. An act does not stand for one moral decision, but for the balance of many; and the culpability, or otherwise, is not always fixed by what overtly happens, which may be in part an automatic accident, owing to a hap of opportunity, even of momentary impression favouring an impulse which would not otherwise have been acceded to,—which was, in fact, morally resisted. The affairs of the Will are transacted far within the outward results of Conduct, this incommensurateness of its occasions being another stroke of thrift in the economy of things. We are tempted to good as well as to ill, and every fluctuation of desire is an efficient act of the higher volitions. For in this supreme region feelings are the facts, and the volitions determine them; the hyper-natural intentions going

on in ascending grades, giving the higher life of the Ego.

This directly points us to a consideration of the Conscience which, as previously mentioned, takes note not only of volitions but also of the omitting to will,—this latter being a real event in the moral and spiritual realms. One other issue, however, was postponed to this place, as being that on which the whole of these questions relating to the Will finally depend.

§ 15. Are the Additions to Structure Natural Evolutions or Hyper-Natural Increments.

This is really but unavoidably asking whether the religious man, though scientifically-corroborated in his discovery in practical Conduct of the illusoriness of the feeling of arbitrary bodily-activity, does not fall into another illusion in his persuasion of receiving increments of energy in a way of gratuitous-imparting? In the absence of mathematical proof of increase in the total sum of force in the mundane-system,—which question we earlier saw cannot be at present decided either way in the existing condition of the calculus, and the possibility of demonstrating which at any time, according to a suggested hypothesis of the withdrawal of germinal-structuralisation in the process of death, may be precluded,—there is no strict decision of this issue practicable. We

are left to estimate the probabilities of the validity of this special act of consciousness in another way.

In the first place, this later persuasion on which the religious doctrine of grace depends arises in pursuance of the discovery of the illusoriness of a prior belief, and seems to give a partial intelligibility as to the mode in which that very illusion arises. The question naturally presents itself, whether, if consciousness is not to be accepted when correcting its own mistakes in an explanatory way, and when extending itself coherently, there is any escape from scepticism? Consciousness would have no means of certifying itself. The conviction, consequently, seems to have this general presumption in its favour,—that it stands for an advanced stage of the process of experience. Further, in addition to a puzzling duplicity of reference and perpetually-unified complexity of consciousness which even the ordinary sensory, intellectual, and emotional experience shows, the special phenomena of Temptation and of the prolonged internal struggle connecting with gradual amelioration of character, witness to the actualisation of the Ego, at the moment when fully acquired-structure is in play, not being a mere question of conditioning-dynamics—this fact of conflict which is added having a mystical style, so to speak, agreeing with such a happening as this alleged one of gratuitously-conceded increments of energy would be. Finally, the feeling each individual has of

being responsible virtually for his own executive-activities (though not physically-operative arbitrarily), owing to aspiration being recognised by a Source of Power outside himself, adds a whole higher realm of Emotion; and, in practice, its acceptance as valid is found to work better than its denial would do, and better than we can conceive any other alternative persuasion doing,—being, in fact, the principle that naturally more-and-more discloses itself as the rule on which a human community can be socially administered in a way combining the severity needed for public safety and a non-enfeebling degree of pity for offenders.

If, on the contrary, what religious men term “mystical aspiration” is only the earliest, faint effectuating of further developing conditioning-faculty in the physical organisation, the persuasion of our efferent-arbitrariness, which, in spite of being disproved scientifically, no human being can shake off, is continued a wholly-unexplained illusion; with a further mistake of consciousness added in the experience of religionists in the still later arising feeling as to energy being imparted from outside themselves for ends useful to their fellows as well as themselves, in a mode of grace.

It does not seem possible to carry the inquiry in a direct way further than this, and we may pass on to consider the Conscience.

CHAPTER XIII.

CONSCIENCE : ITS MODE.

§ I. *The Germ of the Faculty.*

OBVIOUSLY, if our behaviour had no traceable causality,—that is, if it did not produce consequences, and if we did not, in the ways pointed out in the last chapter, believe ourselves to be agents, or what is practically tantamount to being physical agents,—the added experience of Conscience could not arise. There would be no egoistic-continuity of that kind in human experience.

But, owing to events carrying forward causation, and so becoming entities, what is done now arranges what we shall suffer at a later period, when the doings have developed their results, these latter fixing the conditions of further activity. It follows, that so soon as the Intellect has instructed itself to that extent, and is able to calculate the consequences of the volitional-activity, we have always, when acting rationally, to consider more than the present experience. For, as was stated in sketching the Realm of Conduct, the great fundamental fact on which that wide world of behaviour rests is this,—that the se-

quences of the executive-events are so arranged that a present gratification may develope a most ill experience at a later stage; while, on the contrary, abatement of enjoyment now, or it may be the present undergoing of denial and sacrifice, can repay itself many times over subsequently. But for the consciousness of the present moment having this economical relation to the future in its results, Pleasure would be the measure of duty; the fullest possible exhaustion of the instant enjoyment would be the chief virtue, or rather the only one, giving the single rule of morality,—if such a name would then apply at all. Instead of this, all the experience of the Good, which at first is not Pleasure, but is only gradually convertible into it, or into something still better than Pleasure, through the growth of its own noble satisfactions, is made to intervene. To this higher bearing of the matter we will pass directly; but at the outset it is enough to repeat that, in the facts of behaviour in the present conjuncture being made to frame the future situation, and every present situation after leaving the first juvenile stage referring to a previous one, we get a hint of the germ of Conscience.

For in this way, merely by man having Memory and Imagination, a new faculty both intellectual and emotional is naturally constituted, which works retrospectively and prospectively. In the present moment, from the necessary organisation and working of the

neurotic-diagram, we habitually have some anticipations of the future; when that future comes, we shall remember this present, if there be, as there is pretty sure to be; any practical relation of Conduct, just as at this present we refer to some past. So easily and naturally as this is all unthrifty disjunctive simplicity of experience precluded. Our consciousness, at every shifting point of time, is made to be historical and prophetical as well as actual in a narrower sense; and merely out of the use of the ordinary powers of remembering and imagining in what might at first sight appear a large, superfluous way, arises the wonder of an added experience,—a critical faculty standing more-or-less above the present deeds.

This power, by its very nature, continually busies itself in framing estimates of the Conduct then transacting; passing judgments retrospectively, uttering, it may be, reproaches as consequences develope, and giving solemn warnings in advance. Here the germ has unfolded; we arrive at the common natural Conscience which all men have in some degree.

§ 2. How the Sanctions of Conscience arise.

On the point of how the Conscience gets its sanctions, rising in some cases into such terrible intensity, we will speak again in detail later; but already it can be seen that the process is not necessarily so mys-

terious as some teachers have made it appear. It may, speaking only generally, be said here that the developement and self-maintenance of the Conscience evidently must be subject to all the applications of the Law of Pain as we have traced Pain's working elsewhere. Conduct in its higher activity must be just as amenable to that Law as the experience of Beauty is in its passivity. However, what presses to be said now is this,—that in the lower grades of developement great temporary anomalies in respect of these sanctions are possible, alike in the individual Conscience, and in what may be called the collective Conscience of public bodies and communities.

The accumulation of reminiscence in respect of Conduct,—just as we saw was the case with conventional types of Beauty,—may have a decisively wrong preponderance in some directions. Conscience may record numerically the habits of ill-co-ordinations of prejudice and superstition; her own ultimate tendencies to enforce right action being in that time and place distorted; and then the non-fulfilment of the imperfect neurotic-diagrams representing pride and cruelty will give Pain. So, too, their fulfilment will give Pleasure. In a word, at this low stage, Consciences may be temporarily constructed of any type, by the social sanctions giving necessary accumulation of reminiscence in a specific direction. We say temporarily, alluding to the great historical

periods; for in the end, owing to activity conserving itself, amelioration comes to the race if not to the individual from events being themselves entities, and working out unforeseen results beyond our control,—these consequences re-instructing the Intellect, and destroying the old merely mechanical reminiscence.

But the cerebral process of Conscience needs considering with yet further particularity.

*§ 3. Intricacy of the Neurotic Diagrams when Conscience
is Active.*

The neurotic-diagram subsisting in the case of fully-elaborated Conduct, might almost be distinguished into several diagrams simultaneously included in the egoistically-unified actualisation of the personality then instant. A sketch of the intricacy of the cerebral-conditioning may be attempted thus:—

First, there must be a necessarily prompt, if small, literal diagram of the instinctive-motives of the single present occasion as the opportunity challenges them; a second diagram, representing the critical thinking in respect of these motives, in the way of natural ordinary comment of the judgment, so far as that supervenes,—that is, the diagram of the intellectual-operations in regard to the future consequences of the incited act; finally, a third, still higher diagram, that of Conscience proper regarded as an emotional-automatism, having, in the very actualisation of the

personality, in a way yet further removed from the literal mode, set up an activity of its own; its fulfilments and non-fulfilments giving Pleasure and Pain as really as those of the merely sensory co-ordinations. These related diagrams, again, may all suffer higher transformations at successive ascending stages; all the phenomena being multiplied and refined as the sympathies of the individual have been cultivated, so that he is affected by the way in which the fortunes of others are involved with his own direct affairs.

It is the struggle of these not fully coincident diagrams, including the duplication of the emotional consciousness, which, by the egoistic-actualisation unifying them in virtue of its own range, gives the phenomena of temptation, of self-sacrifice, virtuous resolve, etc., accordingly as the struggle is decided in-and-by the egoistic aspiration, mystical or real; all these phenomena being included popularly under the name of Conscience.

In the strictest, supreme meaning, Conscience stands for the fact, that the transacting of this competitive-working, including the volition which determines it, is itself made a final highest department of experience,—an Appellate Consciousness. That, however, is a matter which must be approached by degrees: it will be best to briefly sketch the history of its developement in a consecutive way.

§ 4. *The Progressive Developement of Conscience.*

Conscience begins, we say, at the moment of the first amplification of the experience, when, by the action of Memory and Imagination, consciousness becomes retrospective and prophétical; the gratification of the rude simple diagram of present instinctive inclination no longer being the only aim,—experience being checked, perplexed, elaborated by a reference of the solicited act to a generalisation which, in some way, is a recognised principle of self-duty; founded on the knowledge, naturally obtruding itself, that, if we enjoy to excess now, we shall regret it in the future.

This prospective anticipatory-consciousness more-or-less spoils the present enjoyment of excess, since full, rash enjoyment *disintegrates the other diagram*; that being Conscience's primary sanction; and it, further, entails remorse hereafter when the actual ill consequences of excess follow.

Out of this, as a first conscientious distinction of Conduct, arises the perception of the Good as not being the same as the directly Pleasurable. We become aware habitually that, owing to the consequences of an act having retributory power, present enjoyment is not the right rule to live by. The contest between the Pleasant and the Good (out of which all final egoistic enlarge-

ment is to come) begins; a fight necessarily springing up betwixt clamorous instant desire and prudent postponement, or abstention wholly, or at least moderation. The decision of that struggle by-and-in a volition is itself a more elaborate experience of consciousness, setting up reminiscence of itself; and it is this higher actualisation which, in the primary lowest meaning, gives the Conscience proper. For, as was sought to be shown in the chapter on "Conduct," all the means used in pursuing and carrying out the Good naturally tend to become ends in themselves, and superior ones, gradually developing larger, better sustained, vastly more important neurotic-diagrams than those of the merely untransformed sensory-gratifications at first in question.

In this way Conscience ceases to have simply a prospective reference to the historically-arising consequences of behaviour, relying only on the anticipatory presentiment of future remorse to trouble the present indulgence and check it: it develops requirements of its own, the fulfilment or non-fulfilment of which becomes an affair of pressing instant concern,—progressively growing of more importance than the actual results hereafter. But again we are hurrying a little too fast.

So soon as the Social Sympathies are started, by the discovery that each one must pay regard to the interests of others, or else that no one has any surety

for the lessening of Pain or the increase of Pleasure, with an added positive emotional-enhancement again arising out of perceiving this possibility of benefit, those sympathies in turn add their diagram, giving a further perplexity of yet loftier instigation. On this multiplication of motives taking effect, our experience undergoes a further general enlargement and elevation. A new, more liberal, far busier spontaneity than that of mere prudence towards ourselves bestirs itself; the feelings all suffer an enriching involution; self-sacrifice becomes a higher economy of Conduct,— Temptation now resting on a very different play of altruistic calculation. Again, at this second stage, the decision of the struggle itself is an experience of higher value than at the first stage of the fully-calculable, direct self-interest. Accordingly, the sanctions of the Conscience's own activity (self-enforcing in the way pointed out above) become still more powerful, more dread. For friends, for country, for humanity, anything can be endured; if they are injured by our Conduct, awful compunctions are the penalties, for there are awful disintegrations.

Yet another step has to be taken. A further transformation, a yet more intricate involution, a still higher elaborateness of Conduct, it is affirmed arise when the religious experience is attained. When experience has been so sublimated and totalised that love of a Supreme Being or, if the phrase be preferred, of the

Cosmos, is superadded to love of one's fellows, the last stage of the exaltation of Conscience opens before us; its glory, however, depending upon the apprehensions of the process of the spiritual or, taking it at a stage lower, the ecstatic life. If it be believed that such a process as that which was spoken of in treating of Will is part of the scheme of things,—that there are optional transactions between a man and the Source of all Power, by which he may, in pursuance of right egoistic-aspirations, receive energy by grace, it clearly is not practicable fully to describe the possibilities of novel joys or of fearful penitences.

§ 5. *The Relation of Will and Conscience.*

A word more now may be said as to the connection of Will and Conscience. By the last, the finishing, the most utter stroke of thrift of our economy, the exercises of the Will, when the Intellect is fully informed as to the acts, are themselves the highest achievements of Conduct, and pass into the record of the Conscience; the Will and the Conscience finally standing completely related, our self-fulfilment rising and falling in its value by their interplay, accordingly as it gives the sense of rightness or wrongness, with all the related joys and griefs. Of the way in which the Conscience seems finally to become paramount over the Will, we will

try to speak in a moment. But, first, a remark needs interposing.

To insist on applying to these alleged hyperphysical phenomena, in which gratuitous additions of energy are said to be concerned, the simple arithmetical calculations of physics, asking if the decisions we come to are not mechanical and represent the mere play of motives, is necessary up to a certain stage for the formal purposes of argument, but who does not feel that beyond that limit there is stolidity in the question? In the act of applying that analysis there, you destroy the very hypothesis of this royalest experience of the personality, sinking, as you argue, into a ruder, a drearier sphere. This is a hypothesised evolution, an added department of life,—that of the human heart,—and to those who find themselves fully raised into it, it appears to make itself reasonable in a sufficient way. All—unless they get self-confused—find traces of its wonders in the lowest experience: they seem only to forget this when they talk. For, in the absence of a not yet formed vocabulary for speaking of its events, those who know most of its highest marvels can do little beyond make dumb motions to one another, in the hope of being partly understood.

It is all but wholly hopeless, then, to try adequately to indicate the subtle interworking of Conscience and Will in the finally developed stages. In an earlier

place, we spoke of the numerical discrepancy between the outer and the inner conduct. We *will* many things which we have no opportunities of fulfilling in overt action; on the other hand, we commit deeds we do not will, owing to the happening of inopportune reinforcements of automatic-activity in the nervous system. The business of the Conscience has quite another record, tells a very different tale, from that of the actual behaviour. To wish to arrest the automatic-energising of a passion, even if we fail, is *an event* of which note is taken in that inner sphere, though it may count for nothing in the physical world.

*
§ 6. *Explanation of "Averages" showing in Conduct.*

There seems here to be a possible explanation of the curious facts of averages in human doings, making non-ultimate the mechanical computations of Conduct which appear so curiously to verify themselves in those arithmetical summaries of events. It may be taken for granted that more crimes are willed than there are opportunities to commit ill deeds; the occasions practically available being, from the course of the general circumstances of the world, and viewed in regard to man's executive-activity, usually a fixed number. It may also be added that there would be more acts of negligence if, in the slow process of overt activity, we were not forced to remember the same thing more than once. Upon

thinking a little below the surface, anyone will, indeed, perceive that the final statistics of Will and Conscience cannot be looked for in our operative-doings.

But from this incommensurableness of the two worlds of Conduct, overt and covert, come further variations of the emotional-experience, out of which again arise fresh diversifications of the practical behaviour. A man is rendered interesting, even fearful, to himself; the uncertainty of his own heart making him pathetic over his own lot. We may be sorry for results in all the degrees from remorse to mere regret; we may have to make reparations out of love and pity, as well as from penitence; we may offer excuses, we may ask and grant forgiveness. Men soften their hearts towards one another into a dearer tenderness, as they in amazement recognise the potency of mere ill-fortune, and find that they must hold back and revise their judgments, knowing and loving one another the better for their human weakness.

§ 7. How the Conscience is finally Committed to Virtue.

In these indescribable ways, the Conscience increases its delicate complexity, always tending, if there be any egoistic-aspiration at all, to give larger-and-larger diagrams by associating more-and-more of remembrance and of imagination. Nor is it diffi-

cult now to understand how the human Conscience is finally committed to virtue. It is ultimately virtuous perforce, even if only in a misty apprehension and a vague regret, simply by standing for the fullest reminiscence of past practical rightness, that coming in the end necessarily to have the most frequent and most important intellectual cues; its own action, until that exhausts, being signalised by pain arising on defective repetitions of the best prior Conduct.

This brings us to the point we postponed. In this simple but, up to a certain limit, this effective way, does the Conscience get a monitory authority over the Will, becoming critical of it,—it does so, as hinted at the close of the last chapter, by the egoistic-consciousness in this widest final realm being able to take note not only of volitions but of omissions to will. The apprehending on a critical occasion of the possibility of the Will not acting when the understanding tells us the case requires that it should do so, perplexes the actualisation of consciousness, causing it partially to omit, so bringing the Law of Pain into play; consciousness in the apprehending of fading protesting in the egoistic-realm against the loss of the chance of higher fulfilment. In this natural way, amplified and heightened by the refinements and intensifications of the religious, or even the broadly-sympathetic, experience, we see constitute itself a categorical imperative, including even

its miscarriages of fanaticism? If the right option is not made in time, that is, early enough to tell before the moment for the alleged gracious extra-interposition of added force is past, the train of lower habituated energy having begun to act, then, owing to man having no executive-power himself, the practical behaviour goes forward in spite of a too late option. This completes the dread sanctions, arming the Conscience at every point. Not only by ourselves being made obligatory agents, and being in critical cases forced by some special movement of our own apparatus to give the deciding turn to things, are affairs so skilfully managed as to make sure that, if the result of our behaviour is not the right one, there is no being nor circumstance in the world to which we can attach fault so much as to ourselves; but it should be pointed out, that, in nearly every case, the categorical imperative (again borrowing the fine phrase made classical by Kant) tacks on to itself a retrospective reference. It not only says, "Thou shalt," but, instructed by the Memory and the Intellect, it adds, "Thou oughtest to have done," "Thou didst not." The man sees that in this way has arisen his present incapability of rightness. Indeed, if all went well, it is still within the province of the Conscience to add to the decalogue or catalogue of denunciation the inescapable capital sin of non-attainment,—the not being better than we are.

§ 8. *The Christian Doctrine of the Holy Spirit acting on the Conscience.*

There remains to be considered, as necessarily belonging to this inquiry, the Christian belief of the continual presence with men of the Holy Spirit, offering its co-operation in the mystical region of the Ego,—interfering, in fact, as the believers affirm, in a loving way of urging to the full extent of prompting and attracting which is compatible with man's escape from automatism egoistically. These assertions obviously belong to higher, inner provinces of that alleged region of Dogma which this work purposely stops short from essaying to enter; though by the very plan adopted for its pages it tries to peer far enough in that direction to learn whether or not there be any verifiable appearance of such an added world.

Anyone can see that this sublime hypothesis of the co-operation of a Divine Spirit,—granting there be no insuperable scientifically-arising objections to accepting it,—solves all the difficulties as to how the Conscience obtains the instructing required for giving direct warnings of right and wrong in advance of the practical Conduct. If such a Spirit be co-operating with man's spirit, it is plain how the human conscience can become oracular, and speak as the Voice of God, for that voice according to this

view is there, albeit it hushes to a most forbearing whisper.

The difficulty which stands in the way of the scientist's assent here again arises out of the conviction he has that this alleged transaction implies additions of cerebration which must progressively give increase of the sum-total of force. On that point we have already said what seems to offer in the chapter dealing with Will. The position in which the case then was left may, perhaps, be restated thus:—It is for the Christians to say whether later knowledge of man's apparatus and its processes does not suggest to them that they earlier, in the absence of that detailed information, made larger assumptions of interference with the cerebral-process than their fundamental doctrines really require; and, on the other hand, the anti-dogmatists are under an obligation to consider if their calculus is perfect enough to deal with the reduced quantities of the alleged increments of energy?

All that seems further incumbent on us here is to recall attention to what we may term the surprising way in which the Christian doctrine, in some mode of practical experience, anticipated the scientific reasoning as to the hypothetical requirements of the case. The great Christian teachers from the first affirmed, that so unable was the present human creature to give any physical-effectuation to the assumed mystical-

transaction, that even penitence itself is a gift of the Holy Spirit. It seems clear that if the Conscience has failed,—the conditioning physical-activities having sunk below the range of the Law of Effectiveness,—Pain in respect of the lost consciousness could only return in some such way of substitutory bestowal. Grief for having resisted a Supreme Spirit, willing to help man enablingly, would be the final possibility of getting on a track of retrieval, and obtaining the needed amending of structure. The scientist, in fact, is at one with the Christian here in so far as agreeing that if there be any hyper-physical interferences that is the right description of their mode.

Looked at closely, it is only as to matters-of-fact that the disputants are at issue;—the scientist arguing that the phenomena of altered Conduct instanced by the Christian in support of the doctrine of grace are the results of structural-modification by natural evolution, not proofs of any dogmatic verities.

There, at this stage, we must necessarily leave the matter, going back to resume the inquiry at the lower level adopted pre-determinedly in the earlier pages.

§ 9. Man left not Arbitrary, but a Moral Creature.

Thus by the Conscience being made to necessarily record the doings of the Will and also its omissions, man seems to be left not a merely arbitrary, but only a moral creature. The scheme of Conduct is

somehow made so subtle, that an involution of the experience gives that persuasion, illusorily, if it be not well founded,—Conscience developing naturally-enforced sanctions, together with, as the Christian alleges, others which are hypernaturally granted, in a substitutory restoration of pain after it has faded. But, according to these views, the Will does not irrespectively unsettle everything from moment to moment, but practically only exercises its prerogative with enough of frequency to effect the highest emotional economy. Nor does any mystery attach to the minor sanctions. It is plain that no matter what pleasure lower Conduct can give, if the foregoing of the act has ever formed part of a nobler co-ordination, the memory of the higher behaviour is stirred by the natural interactions of the neurotic-diagram, and pain is felt in proportion to the dilapidation of reminiscence. Besides, from the nature of the case, the diagram which has been impaired will be one of wider and more frequently recurring cues than that which was fulfilled, since it includes more of practical rightness; this being in the bulk of instances made undisguisedly intelligible by some special directly-traceable ill consequences of the weak indulgence (either as natural result or social sanction) having to be faced in the future, arising under the Law of Causality, which, as we saw above, is necessarily pledged to virtue, within the range of the Law of

Effectiveness. How can the Conscience, until it itself decays, fail of sanctions?

On the other hand, it is not impossible for the penalties to be in part evaded, by dissipation being made full enough, that is, novel enough, and this may go on until the sanctions are destroyed; though that, as was shown in the chapter on "The Ego," must lead, in the end, to a suicidal-forfeiture of personality, unless the fritterings of reminiscence be retrieved by penitences substitutorily reconstituting the diagrams which have been lost. This last chance increases in its risk of failure as "backslidings" are repeated.

But the final word upon this subject may be more cheerful. One of the points mentioned above was not pushed to its full conclusion. As consciousness perfects in the successful cases, accumulating more-and-more of reminiscence, owing to the necessary enlargement of its sympathies, self-sacrifice becomes increasingly spontaneous; the practical volition has corresponding chances of perfecting its lightness, its rapidity, its freedom of alternation; until, as all the great religious teachers affirm, the man, at a certain stage of his experience, finds himself so improved structurally, that in ordinary experience he is habitually in conscious contact with a Supreme Being who is creative, and has the power of giving boons of new joy eternally, all experience becoming

so full of alternatives that any and every fulfilment is an enlargement. That is the religious ideal of the Conscience ; its ultimate purpose being the attaining of bestowed delights, not the inflicting of penalties.

§ 10. Faith the Final Function of the Conscience.

Those who cannot accept the religious view will still be able to see that Conscience, in so far as it implies an automatism (and a neurotic-diagram there must be), must tend to perfect its own activity ; since it is the very characteristic of the Law of Causality that energy shall work out the largest possible result by its own interactions elaborating one another. Is it not, therefore, in the way of natural consequence, that Conscience should ultimately develope a positive as well as a negative sanction ; becoming itself prophetical of higher, better possibilities of Conduct ; and, offering presentiments of fresh and further gratifications of novel consciousness, its activity not being confined wholly to punishments.

In a word, just as we saw that the Intellect developed Reason, so does it now suggest itself to be in the proper course of things for the Feelings, by means of the Conscience, to develope aspirations of Faith. That is a point which will again come up later in a separate chapter. In the meantime, the next step would seem to be to try to get a working-definition of the " Soul."

It should be added, that the Church of Rome has sought to raise Casuistry into a kind of science. Her system, in fact, throughout all the grades of her hierarchical-organisation, made applicable to the priesthood as well as to the laity, is that of placing consciences under mutual surveillance, but with an obligation on laymen not to have recourse to it unauthorisedly among themselves, but to resort to a skilled, certified, and authoritative administration of confession and penance by trained priests. A primitive rudimentary psychology can be quoted in support of this mode of dealing with Conscience, but, if the views put forward in this chapter are held to be established, it follows from them, that it can only be consciences in a low stage of activity whose affairs are intelligibly stateable in confession to another human ear, or in respect of which another person's superintendence or direction could be either needed or be really available.

The question which is popularly described by the phrase "Freedom of Conscience" is one belonging to politics rather than to speculative thought, being, indeed, one of the crucial tests of statesmanship.

Something will be said of the individualised "Duties" which Conscience affirms, in the chapter on "The Organisation of Experience."

CHAPTER XIV.

HYPOTHESIS OF THE "SOUL."

§ 1. *The Ego can only Indirectly Command its own Recurrences of Actualisation.*

AS has been abundantly urged already, the Ego after finding itself in a state of actualisation is capable of ceasing from that state, and, as matter of fact, does so cease with much frequency. It is clearly made out that we are only conscious along with the happening of certain specific events in the Executive System, those which we, in the phraseology of our sensory-intellectual experience, name as precise rapidities, volumes, etc., of motion. These, in pursuance of the cosmos interquantifying itself by a process which we style Organisation, develope in the minor executive-system of the human frame as is determined by the inter-activities between it and the larger Executive System.

At this point of the inquiry we may for a moment leave out of the account the fact of there having to be corresponding variety of conditioning executive-operation for the multiplicity of diversifica-

tions of experience arising, completing, and ending while consciousness is subsisting; confining attention to the larger circumstance of the beginnings and ceasings of the egoistic-actualisation itself, which necessarily includes the other vicissitudes. The Ego, then, has no control over its own recurrences after cessation of its actualisation from one occasion to another, otherwise than in the indirect, limited ways in which a man can during his periods of awareness and activity determine, by intellectually-ascertained methods, the future course of the executive-events; securing by availing himself of its own adaptations of working that it shall give the required conditioning-rapidities, volumes, etc., so far and so long as its causation naturally affords them. This is the full, comprehensive statement of the case, taking in all its artificialities, but, for the first stage of the inquiry, it may again be narrowed considerably. It is true, that it is needful for certain rules of nutrition, etc., dictated by appetites, to be observed; but if this be done the actualisations of the Ego recur by the natural physical-working of the bodily-frame renewing the due rapidities, volumes, etc.

The fact, however, to be grasped here is this, that, owing to the limitations which the Ego shows in us, giving cessation, etc., it is not enough to regard the Ego only, but we have besides to take into account an actualising-apparatus.

§ 2. *Is not the "Body" all that is Needed for Purposes
of Egoistic-Actualisation?*

This is the question which instantly next arises. The body, prompted by the interactivity of the cosmos, is certainly seen to be sufficient for the purposes of the initial egoistic-actualisation; its sensory-organic system, extending inclusively between the brain and the periphery, being the apparatus in the first instance for the experience of sensation. But, as we saw very early in these inquiries, the bodily-organisation, so soon as the cerebral play of reminiscence takes effect, needs no longer to be entirely used on the full peripheral scale. Repetition of nervous activity intercranially is enough. Great portions of the frame, in fact, may be lost, and the sensory experience for which they were originally necessary be retained, if only the nervous system is kept intact at the higher centre.

So early as this, therefore, a kind of qualifying of the word "body" as the apparatus for egoistic-actualisation•is suggested. The physiological-frame as we have it in its completeness is the required machinery for enabling us physically to operate in this world, but the Ego does not, after cerebral-habituuation has been effected, need the frame in all its entirety for mere re-actualising. Moreover, we have seen that all the elaborate experience which supervenes on the sensory,—viz., the intellectual

and emotional phenomena,—arises intercranially in connection with representative reminiscence of this largely diminishable, foregoable peripheral-impression. Further, if what suggested itself in considering the "Will," and in inquiring generally into the Process of Conduct, was well founded, there are great developements and additions of structuralisation mystically obtained for which the brain is the only field.

Again, then, we find that the word "body," in the sense in which we are now applying it, is used in a way of diminution and fineness compared with its general bulky significance as the name of the whole physiological-frame available for physically operating. What we are really in search of, let it be remembered, is the guarantee of the re-actualising of an Ego which is so limited as to be beginable and ceasable; and, as we shall see later, it matters a good deal in respect of the likelihood of that guarantee stretching on into another life after this, whether there is or is not a possibility of diminishing, below the dimensions of the entire physiological-organisation of our present frame, the actualising apparatus and process taking effect originally here. It is necessary, therefore, to follow this point into detail.

The guarantee of the Ego's initial-actualisation as to this world's experience, and of its resuming

here after periodical suspensions, is the Nervous System transmitted from our progenitors, which gives the specific conditioning-rapidities, volumes, etc., required under the Law of Effectiveness. No one is in a position to say how merely-germinal consciousness is with the infant; that is, with how small a coincidence of sense-activities it begins, having to gain its education by building up reminiscence. But there are grounds for supposing that we inherit not merely what may be called the physiological-possibilities of faculties of the sensory kinds, but pre-adaptations of the collective-molecules and connecting-fibres in the brain, giving to sense-impressions enough of the required coincidency to render a primary actualisation of the Ego at a little beyond the rudimentary operative-stage. At every accretion of our own acquirement of structure the guarantee and range of our actualisation heighteningly improves in this way.

Is there any objection, in the light of these facts, to making a distinction between the larger physiological-frame and this interior modifiable-structuralisation? Rather, is it not a convenient distinction?

§ 3. *A First Rough Definition of the "Soul."*

If we now hypothetically take into account the higher as well as the lower possibilities, the alleged mystically-obtained improvements of structuralisation as well as the merely educative-developements, a first

rough definition of "The Soul" may, perhaps, be attempted as follows :—

It is the interior, higher, egoistically-obtained organisation of the actualising-apparatus always modifiable by the moral conduct of the Ego, but representing potentially its total of reminiscence available for the conditioning and defining of personality; carrying forward the possibility of specific-actualisation of the Ego in the intervals of its suspensions as those are fixed by the fundamental law of Consciousness, and enabling and conditioning the Ego's resumptions at the next occasion simply by taking on motion from the lower organic-operations of the physiological-frame and the impressional-cues at the time acting; giving, in case of there happening right prompting, possibilities of recurrence of any of the Ego's historic-personalities beyond the current actualisation, in so far as that does not include them. For, as we saw in the earlier chapters, in none of our actualisations of the Ego is there used more than a small portion of our stored potentialities of reminiscence.

Two characteristics of the Soul appear in this way to be clearly made out. First, it is not of itself always fully included in consciousness, and, second, it is always modifiable by the Ego, owing to the latter, by virtue of being mystical, having the function of obtaining—though not of supplying actually—

changes in it. The further question now arises,—whether the Soul does not suffer changes, alterations, and affections apart from those worked by the moral functions of the Ego?

Certain special facts of human experience seem to hint that it does. It appears to be suggested by them that the Soul develops what may be called a vital history, determined in a merely natural way, by its own interactions and by the causal influences of the world upon it. Just as in the working of the Intellect the ratiocinative process can go forward below our knowledge, only emerging into consciousness at this-and-that stage, so our Passions weaken or strengthen, or the chief habitual feeling changes wholly in some respects, by what appears mere lapse of time, or else it modifies more suddenly in answer to alterations in our circumstances and position. And within these larger modifications, there is a smaller set of changes always going on,—the successional-variations of Mood, which, so far from being exactly willed by us are continually taking us by surprise. A little reflection will show that it is possible to regard this very circumstance of the Soul having a natural history of its own which develops in the intervals of the Will's acting in the alleged hyper-physical way, as the means of furnishing some of the opportunities for the Ego to act spiritually in altering

and rectifying the developments thus arising irrespectively of its own determinations. If the Soul and the Ego were identical, that is, so to put it, co-terminalous, all the opportunity for this high business of mystical inter-adjustment would be gone. But, as it is, a man's moods are not in his own keeping; he is in so far made dependent on his organisation. Opportunities challenging the Will to act, if it has any prerogative such as is alleged, are in this manner rendered certain.

§ 4. *The "Soul" requires Prompting Cues.*

But a further great qualification above briefly hinted at needs now to be set forth more particularly. The Soul, though we have styled it the guarantee for the actualisation of the Ego in specific ways, is not sufficient for this of itself; it is, according to the hypothesis, indispensable for that purpose, but it is still of no value apart from a world to give it its own cues, and that world must be one adapted for the maintenance of the Soul's activity. Man, being a creature, is not independent to the extent of having a Soul that will suffice of itself: the Soul only subjectively-actualises self in specific definitions of personality when challenged by objective promptings and occasions. It is itself dependent upon the larger system of causality of the universe amidst which it is placed.

Within these limits, the organisation for this subjective-actualising of the Ego may be expected naturally to conserve itself. There is no need for making this mysterious. If the larger causality does not in some way interfere destructively, doing so either gradually or abruptly, the natural tendency of organisation in every case is to maintain itself as it is. If the "Soul" be a systematised-activity which has arisen according to law, it must follow its own economy, so far as the collective-operation of energy gives the opportunity. Putting it in another way, every structural-economy, by virtue of being such, is itself a cause of its own continuance so long as the due conditions are supplied. Change of place, for instance, cannot be expected to make any difference if the collocation of influences is the same; succession in substance signifies nothing so long as there is virtually-identical and timely substitution of parts,—that is, so long as there is effective fulfilment of the grouping of activities which operate the functional effect.

§ 5. Summary Review of the Position.

How far, then, have we now got? We have found that the pre-arrangements of the Nervous System—so set by hereditary-transmission as to give a certain coincidence in the sensory-impressions made by the world into which we are born—form the immediate

guarantee of the primary-actualisation of the Ego; and that the subsequent elaborations of sensory-experience record themselves in cerebral-organisation in such a mode, that the activity which is originally given by the full sensory-functions of the body when its organs are objectively-impressed, is made recurrent afterwards without the body (in the larger meaning of the word) needing to repeat the activity peripherally, though a cue of reminiscence has to be given in some sensory kind;—it being possible for a great part of the physiological frame to be dispensed with if the cerebral system be preserved efficient.

This interior cerebral-organisation, as inherited by us and cosmically-prompted in due manner, is capable of actualising the Ego in the first stage, and is plainly adequate, being self-conservative from one occasion to another, for the purposes required of a "Soul" in reference to the ordinary sensory and other primary experience of this world. But it is further affirmed, that, when Conduct occurs,—the efferent-apparatus being then brought into play, and the whole activity taking on a metaphorical style as the Ego develops Will and is challenged by Conscience,—there are additions gratuitously made to the interior organisation. This spiritually-obtained structuralisation, if there be any such, has, consequently, thenceforward to be included under the term; becoming, as it increases, more-and-more what is

meant by the "Soul," since it carries forward the added potentiality won by the Ego in respect of higher-actualisations of personality.

Lastly, the organisation not only maintains itself, alike in the originally-transmitted endowment and in the morally-obtained additions of structure, but it seems to work out an automatic destiny of its own besides the alleged spiritual operations of the Ego; though that destiny is finally subject to those very operations, since they, in an inscrutable way, in the moments when Will acts, are said to rise above the moods naturally offered by the Soul and in effect to obtain changes in them. Under this view, every such right modification is a heightening of the Soul's organisation, and accordingly as the process of the Soul offers—in pursuance of the promptings of the larger causality of the world—successive actualisations of the Ego, and the Ego on the rare occasions of Will acts in its special way of modifying the Soul, the actualising of man's consciousness goes on until—until when?

§ 6. *What is sought for is a Guarantee of Resumption
AFTER this Life.*

Until when? we repeat. For that is the final point to be raised in any handling of this question of the Soul. There comes a moment in the human career when an event happens after which there is

apparent cessation of man wholly. That occurrence we call Death. The larger order of causality we have spoken of as constituting the present world, either by gradual progress or by sudden injury operates destructively upon the physiological human-apparatus, such as we sensorially know it, and dissolution of the body supervenes. It is that last capital fact in the mundane history of man which gives such intense significance to this inquiry as to the Soul. Is there in the Soul a guarantee, not only for the resumptions of the Ego's actualisation in this world while the visible, tangible bodily-frame exists, but afterwards in another scene, when in the course of Nature the present structure which we see and handle fails? It is a very old question,—are there any new reasonings to be offered bearing upon it?

First of all, we may say that modern Science has demonstrated what may be called the physical possibility of the extension of experience beyond this life. It is conclusively made out by intellectual-inference not only that the present conditioning of our consciousness only includes a portion of the inter-quantifications of the Executive-System of the Cosmos, but that these present rapidities, volumes, etc., which arise intra-bodily, are slower in rate than the intellectually-inferred ones occurring extra-bodily. Further, although for Christianised

peoples prior to the arising of Modern Scepticism, this whole matter was a question remitted to Faith and alleged Revelation rather than held as belonging to merely natural knowledge, Science may now be called upon in respect of it in another way of hint and suggestion. By its advances in tracing the history of Organisation, Science has so far familiarised itself with the idea of prospective-determinations of structure,—that is, used itself to expect development in specific-modes of accretion of activity to arise from progressive coincidence of enabling-conditions fitting in with potentiality in the germ,—that it is not now shocked by the conception of a large heightening of the type in a genus with a great widening of its active sphere. The difficulty which scientists, with their present mental habituations, find as to the future existence of man can scarcely be any general presumption of impossibility; it is simply a lack of evidence in support of the hypothesis,—the analogies seeming not to go the whole way. For instance, the variation which may develop in a germ, giving an advance in the type of the species, is not the same thing as the continuation of personal-identity, which is what is really at the bottom of this question of the human soul's surviving. Improvement by-and-in the act of propagation,—its prospective determinations being decided in the dark moments of contact between the succes-

sive links of generations rather than in either of them,—is a different matter from an ascending-immortality for man. A germ inheriting a possibility of improving-variability means the succession and heightening of species by transmission, increase of potentiality being given by general effect; it does not offer us the assurance of absolute continuity in the *individual*, but, in fact, supposes the contrary of this.

What, then, would amount to a guarantee such as is asked for in man's case?

Let us clearly apprehend what the case hypothetically requires. It is neither more-nor-less than this,—that the Soul, in order to include the guaranteeing of future egoistic-actualisations in another and higher state, should develope within the apparatus which actualises us sensorially in this world an organisation subtler, more elaborate, and should partly use it here, necessarily not in a way of sensating, but in another manner of experience of which we will speak directly. Immortality, it is plain, would theoretically be provided for, in spite of periodically-arriving dissolutions of body through so-called death, by supposing that the organisation which gives us awareness of the world we are in always develops another for a next world. But, as above hinted, we can have ratiocinative surety of this only in one way, namely, by an anticipatory use, to some extent or other, of

this finer organisation being disclosed here-and-now. Practically, the question, therefore, stands thus,—Is there proof of anything of this kind happening with us? Well, what kinds of evidence are to be looked for as intimating that in the present body a finer organisation is being prepared, and, by partial activity, is being mixed up already reminiscently with our historical-continuity?

§ 7. What Evidence is there of Pre-habituatiion of Apparatus?

If it could be established that there was a basis of facts for the following conclusions, would they amount to the required evidence?—

If (1) the rapidity of consciousness in the process of some of its higher modes—those arising later than the Ego's primary-actualisation—was in excess of the rate of the nervous force, as Science knows it in respect of the conditioning of sensation; if (2) certain of the Feelings were seen to be too large in their scale for only this life; if (3) the circumstance of Pain occurring necessitated the assumption that the actualisation of the Ego was not demarcated by the sensory-impressions or ordinary organic-activities current at the time.

These, obviously, are very delicate matters, asking the finest possible appraisements; but if any evidence is to be had on this subject, it must necessarily be of that subtle character.

In one of the very early chapters, we pointed out an apparent discrepancy between the speed of reminiscent consciousness in a certain way of egoistic recognition and the rate of the nervous force. It was there urged that the latter seemed insufficient to account fully for the former,—even allowing for the use of the short cerebral-routes in place of the full peripherally-communicating nerve-fibres,—if it were supposed that, for every progressive cumulation of consciousness, the neurotic-diagram had to be re-framed throughout in a sensory mode from second-to-second, or rather in fractions of seconds. It was hastily reasoned that this latter supposition was not necessary, since it might be that any, even the minutest, accretion of diagram might constitute the egoistic-consciousness differently throughout the whole area of it. But, in the case of our adult, more perfect experience, the suggestion comes back that even this economisation is not enough to account for the rate of vicissitude in the primary egoistic sentiency. It is a subtle point, to be tested in each person's private observation. Let him closely watch his own experience and see if he does not get hints of rapidity of egoistic-adjustment in excess of any neurotic-diagram, or any effective portion of any diagram, which the nervous force as we know its measurements for the peripherally-deriving operations of the sensorial frame, could possibly have given in the space of time.

We certainly often, in an implicit egoistic way, understand one another by means of the slightest signal; our replies come quickly; the judgment decides; we anticipate,—it frequently seems that we do this at a speed in reference to which peripherally-deriving nervous-transmissions are slow. Most persons will, perhaps, be ready to instance dreams as the best examples. But dreaming, when fully considered, loses some of its apparent decisiveness in this matter. It at once occurs to one that then the activity is most interior, is least checked and delayed by peripheral-derivation, the short cerebral-routes being nearly wholly used. Everybody, however, knows that a moment's nodding in a doze may appear to give panoramic-ideation in quantity hugely excessive beyond the rapidity of the nervous force, allowing to the full for all that shortening of the lines of its transmission. The puzzling part of these cases is this, that we seem in dreams to have sensory-consciousness in detail, exactly answering to that which we get originally from the peripheral-terminations of the nerves, while all reasoning says that for the experience of colours, sounds, tastes, etc., in that way of precise reproduction, the very same sizes and rapidities of nervous-agitations must have occurred cerebrally. On the other hand, we repeat, the time-calculation appears to show that this is absolutely impossible.

One possible hint of explanation there is which must not be overlooked. It may be that, in the final moment of returning to the broadly-waking state, we largely translate into their sensory-images related higher-movements of egoistic-actualisation, which were those we had been really experiencing; the neurotic-diagram unfolding in the lower sensory-style, and requiring all that detailed explication to become sensibly intelligible to us. In that case, dreams as we relate them with particularity to ourselves and others, are mainly imagined by us in the act of relating, or of ideating in a private way, with just the egoistic starting-cue brought out of drowsiness; being, in fact, laboriously worked out backwards into detail by us, not having been sensorially gone through before at all beyond some scattered fragments. Also, it should be added, that there is a number of cases on record of narrow escapes from death by drowning and other accidental perils, in which the persons allege an instant panoramic act of collective-sentience arising in this way, effected apparently much in excess of the rate of the peripherally-connecting nervous apparatus. However this may be, certain experiences of the waking state, even admitting that something of the above explanation hinted as to dreams is applicable to our mental process then, seem to show a striking disparity between the rapidity of what may be called

our higher egoistic-sentienty and the speed of the sensory nervous force. It is, we repeat, a point for every one to test for himself in his own case.

Below, in some added remarks on Pain, reasons will, however, be found to offer themselves suggesting that any such higher, subtler organisation, if it exist, has not much range of independency; its greater rapidity only being available from point-to-point of *vital* connections between it and the lower organisation. But we have not yet dealt with the head of evidence which comes next in order in the list hypothesised above.

The second of the three points named—viz., that the Feelings in some instances seem to be too large in scale for this life only,—is a matter of such private experience that to hint at it is nearly the utmost that can be done. Our best intentions, our highest resolves, every transaction in which love, or we may add hate, is concerned,—in fact, all the moral business of the Ego,—have a scope and prospect, in the choicest moments of their stirring, appearing to stretch beyond the range of mortal affairs. Such a word as “ever” gives a reverberation more prolonged than suits mundane periods of time; it appears to the heart resoundingly to echo on into eternity. This is an argument very faint, most capable of illusion; still, how can we exclude it, for it is of a kind precisely suited to the

case? If any one puts it aside, he should do it slowly, quietly; if he despises it, he may know that he is not in the right mood for weighing it. But in passing on to the third point, we go to things more practicable.

At the end of the chapter on Pleasure and Pain, it was stated that further reference would be made later to the practical bearing of the fact that when Pain is being felt the nervous-grouping is, in comparison with a prior case, less;—in other words, that non-impression affects us and becomes in our experience an event as real as impression. If the Ego was wholly actualised directly from the outer frame without any other apparatus or reminiscent-record having to do with its conditioning, it is not easy to see how consciousness could in such case be injured in any other way than the merely negative one of unperceived defect from non-complete recurrence of previous experience. But that very non-recurrence, so far as we have been able to make out the process, is what gives Pain. In Pain clearly there is much more involved than mere negation; there is somehow a practical survival of reminiscence of the earlier better experience. To put it in another way, the Ego is aware that it is at that moment, in comparison with an earlier one, ill-actualised. How can this be, unless its conditioning is somehow in excess of the lower occasion of current or reminis-

cent impressional-activity? If, however, it be supposed that after the initial childish experiences, the Ego is actualised in a duplex way, in a measure getting its actualisation—that part relating to the finer intellectual and emotional sentiency—from an interior organisation always in process of being framed larger, swifter, higher than the visible, palpable apparatus, but which, despite its superiority, is not independent of the lower organisation, having vital connections with it, and being, in fact, dependent upon it for its prompting-occasions, obtaining in this mundane state no sensory experience of its own, then the difficulty alters, whether or not it lessens. Under that view Pain would stand for a vital injury, not of the tangible frame merely,—for we have seen that that rule does not in any understandable way verify itself, there being no intelligible proportion observed in the cases where it would seem to have application,—but it would represent an injury done to a formative-relation between the outer frame and an inner organisation, both being concerned in the higher actualisations of the Self.

The process of these ill experiences of Pain would, indeed, according to that theory, be this,—on the prompting of the sensory-apparatus, the inner, higher organisation would begin the corresponding added subtler-actualisation of the Ego, but would only be able to sustain it to the points where it was

itself next vitally-dependent upon the outer body, and those in some cases not coinciding with the vital points of the outer frame, discrepancy would occur, and a struggle, as it were, follow between the two conditioning-apparatus in effecting a joint result; the Ego—owing to the superior swiftness, etc., of the one conditioning-mode over the other—being actualised in the higher way enough in advance to be aware of its ill fortune at a part of the lower range. Does this seem a more conceivable cause for Pain than mere defective-activity of a single actualising-apparatus?

Some subsidiary considerations offer in apparent support of this view. For instance, the swift efficiency of injury in producing Pain in some cases would seem to have light thrown on it by assuming that it takes its rate from the susceptibility of the finer, more rapid organisation at some point of it happening to be directly got at. A portion, at least, of the Pain we feel appears to come too quickly to allow of any wide interactions affecting the vital-groupings of this palpable outer frame to have taken place. The “irrationality” of the location and intensity of some of the worst pains would, under this hypothesis, in so far be mitigated; since it is not for us to say where and how occur the vital connecting-points between the two organisations, but we can see that it is not likely they would exactly answer to what

are the fatal points of the lower frame. A still more general remark suggests itself: the Law of Effectiveness in respect of Consciousness, of which so much was said in the earlier chapters, may get some light thrown on it here. At least, the boundary of its inscrutableness may be put a stage farther back. For consciousness there may be required a grouping of activity which has a vital value for the formation of the inner-organisation, simultaneity of impression of two senses, with coincident arrival of their motions in a cerebral collective-molecule, being necessary for that end. In such case the conditioning of Pleasure, regarded under a physiological aspect, would consist in the successful preparation of an apparatus for further continuing and improving our experience.

Then, further, all the facts of the intellectual and moral consciousness have to be considered in the light of this view. It is difficult to apprehend anything of the processes of Intellect and Conscience without assuming a duplicated-actualisation of the Ego,—the one, though needing to be prompted by the other, being swifter and more spacious than the first, and so capable in a certain way of taking cognisance of it. What we earlier spoke of as the sensory-experience taking on a Metaphorical Style for this higher-sentience, would mean that the Ego, in its conditioning, included in respect of that sen-

sating additions of these higher, finer rapidities, volumes, etc., of motion, the lower ones in them running forward promptly into the higher, and being, so to speak, progressively sublimated for purposes of quantification. Moreover, the additions to structure spoken of as being mystically-gained through the Will, would, as we before pointed out, take effect executively in the interior higher-organisation; and this would account alike for the fact of Conscience, within certain minute limits, enforcing itself over the appetites,—its rate-and-scale being superior to theirs in so far as it is perfectly constituted,—and, at the same time, for its being necessary to exercise Will within certain limits of time, if the action of the outer frame in cases of Temptation is to be prevented or checked;—unless, that is, it is one of those supreme moments of fully-challenged, prolonged, inter-connected activities, when, by means of the alleged hyper-physical power largely coming into play, extraordinary additions to structure are made.

§ 8. *The View seems to throw Light on the Egoistic-Degradation seen sometimes in Age and in Disease.*

Lastly, let it be noted that the view seems to cast some light upon what has been the great puzzle in connection with this subject,—viz., the fact that in advanced age the Ego can show degeneracy of actualisation both intellectually and morally. If

the interior higher-organisation, owing to having no sensory experience of its own, and being dependent upon the lower apparatus for reinforcement at vital points of inter-association, can only use occasions furnished to it, and is delimitated in doing that by the number and configuration of those vital-points which are efficient, each of these having only a local validity,—that is, the reinforcement not extending from it beyond a certain range,—it is evident that the higher-organisation will be brought into play only in so far as the grouping of the vital-points is effective. If by decay of the senses and the frame generally in old age, the order in which the sensory-activities occur does not, owing to peculiarities of happening in the mystically-obtained apparatus, agree well with the order of the vital connecting-points, there may be any degree of degeneracy in the recurring-actualisations of the Ego. The very same thing may be brought about at any time of life by disease, and, also, in some respects, by artificial manipulation of the sensory-frame, by using stimulants, intoxicants, etc. But this is not necessarily saying that the higher-organisation itself decays; for anything that we can affirm, the more sparing sensory-use which comes with old age may be a naturally-provided rest for giving better effect to vital laws implying interactions of the higher-organisation itself. Decay of the outer-frame may

successively and progressively disconnect the vital connections between it and the inner-organisation, they having served their end, and being no longer needed. Continued sensory-efficiency might, indeed, for all that we can say, remembering the dark processes of growth in external Nature, be hindering to the vital developement of the inner-organism in some way of developement which requires that the outer structure should not throughout fully maintain its challenges of the subtler-apparatus to activity in exact agreement with the lower mode.

At any rate, it would be enough to establish proof of non-decay in the inner-organisation, if in proportion to the effectiveness of the sensory-activity the higher sentiency maintained superior rapidity and spaciousness when and in so far as it was rendered. But how do we know what allowances to make when the order of happening of the vital points of this supposed interior-association is hidden from us? All that can be done in the way of argument is to fall back upon a recalling of the general fact,—that the existence of those vital-points is suggested by the maturity of the higher-experience (prior to the setting in of this abatement of its manifestation we have been speaking of) not coinciding with the maturity of the sensory-activity, and by its omissions and its decreases, occasioned either by age, disease, or artificial stimulation, etc., not answering with any-

thing like strictness to the laws regulating the vitality of the visible, tangible body.

Great mental and moral vigour, as everybody knows, can occur along with extreme bodily debility, if the weakness will but respect some centres; most surprising injuries,—cerebral, we of course mean,—if they miss some points, have no significance for the higher-sentienty. In fact, bodily-weakening, should it occur in some forms and orders of happening, seems to favour the other inner, inscrutable vitality.

§ 9. The Present Sensory-Experience must be Lost.

But, let us add, no eagerness of hope in snatching at presumptive evidence must be allowed to obscure the fact, that the laying down of this present organisation of the human body means, according to all scientific reasoning, the cessation of the specific inter-quantification which the Executive System gives man here in-and-by it. Granting that the Ego discloses a power of subsisting in actualisation along with other higher rates, it seems impossible not to conclude that the absence of those lower inter-quantifications must mean the omission of the specific sensory-experience they condition: It is conceivable that there might be other sensory-experience; it is not possible to think that we can have this also without a general enlargement of apparatus and faculty, including it in some way of restoration.

The only approach we have to a hint upon the subject is that already given, namely, that this sensory experience even now subtilises in our consciousness in the higher cerebral stages. As has been so often mentioned, sensating runs on into a metaphorical style, and at the passage into that style the conditioning seems to tend towards higher rate, etc. Is it possible that in this way our structuralisation pre-habituates to what may be called a representative retrospective-activity even at a future higher rate of the executive-operation, such as would give a degree of familiar reminiscence? The question naturally suggests itself,—Is there any trace of this process in the present state? Curiously enough, a whole line of philosophers, from Plato to Wordsworth, do believe that they detect reminiscences of another state mixing with this one. However, the point is hardly one for strict pressing here, since we cannot deny the possibility of the Ego *beginning* its actualisation in this life, unless other evidence can be brought in.

It is impossible, however, to avoid the recollection again arising that the Christian dogmatists, by a striking coincidence with the scientific demands of the case, affirm that there will be a reintegration of the specific-interquantifications of this present sensory-experience in its non-metaphorical stage. They assert, as an article of faith, that men, no matter

what enlargements may be granted to them, will subsequently be also practically reinstated in the present human body, and that this world will be again included in the then wider range of their experience. Modern Science, even as it turns away from that kind of affirmation, based as it is only on personal authority, has to bear witness to its being a shrewd hit of speculation to this extent,—that something of the kind must really happen if the actualisation of the Ego is ever to avoid the limitation of not including in its conditioning the precise interquantifications of that part of the cosmical Executive-System which is represented by this world.

There the matter must be left; we cannot here carry it any further.

§ 10. Summary Restatement of the Hypothesis.

Such an interior finer organisation, used partly in this life for the subtler of the Intellectual and Moral processes, would be adapted to escape injury—that is, vital incapacitation—from such material shocks as can happen in this world; and if its own vital-scheme, in the process of use and maturing, developed, as it were, by tentative effort, a subtler sensory-apparatus for future use, that apparatus would necessarily take on higher rate and wider range; while the organism itself, having been in part actual

here, might give to us at least partial self-familiarity by its conditioning in a future state, where things were partly on the same plan though differing in scale and speed. Let us repeat that for the apprehension of that wider scale and higher speed a quicker sensory-apparatus plainly must be obtained, either in a way of developement or addition; and, further, that it is impossible we can have any direct evidence of such inner-apparatus while in this present sensory embodiment and environment. But if the higher-sentienty seems to hint such an interior finer vital organisation, which, though dependent for its prompting-occasions and for its maturing on the body, yet does not ultimately show vital coincidence with the vigour of the outer frame, but, on the contrary, as its maturity progresses exhibits non-coincidence, then we have a sort of indirect suggestion of a *vital* organisation already existing, capable of carrying forward the higher part of our present actualising-process. Moreover, it is clearly inevitable that for such an enlargement of our sphere to take place, the present body must be laid down: the event of Death, consequently, falls in with the possibility, and looked at in that manner, it in so far helps its probability.

It will be borne in mind that in the chapter on "The Will," something was said as to the impossibility of deciding either way by mathematical-proof

the problem of whether there is quantitative-interchange between this mundane-system and some other part of the physical cosmos.

Finally, although the world and a "soul" are needed to give the Ego its actualising-occasions, neither of them throws any light upon the fact of egoistic-consciousness itself. All that we can apprehend as to the latter is, that when due prompting is given by the world and the soul, the human-self actualises additionally by a Law to that effect. It is a question to which we will return by way of a last word in the later chapter on "Metaphysics." It is only with the actualisations of the Ego that we have been dealing here, since for these a soul may be fairly hypothesised as part of the apparatus. When the Ego is fully actualised, Conscience then taking effect, the soul does not preserve commensurateness with the Ego, but, on the contrary, is itself modified by it, if there be truth in the allegation of religious men, that by right options of the Will there can be mystically obtained additions of structure.

Along this way of hypothetical reasoning, we are pointed to a realm which is distinctively called Spiritual, the unascertained hierarchy of these added laws fixing the possibility of what can happen in the way of future heightenings of experience.

In pursuance of the inquiry, it is, accordingly,

necessary to turn next to the subject of "Faith," which has at least had a working-actuality in the past of the human race, whatever may be the event henceforward.

CHAPTER XV.

FAITH: IS THERE A RATIONAL BASIS FOR DOGMA?

§ 1. *Organisation naturally Exhibits a Tendency to Further Development.*

BY way of throwing what light is possible upon the allegations which are made as to this final phenomenon of our experience, it may, first of all, be recalled, that, at each stage of the process of our life, in every department of it where automatism, that is structure, is acting, there is shown, short of an ultimate limit having been reached, and in the absence of general causation by inauspicious happening acting restrainingly or destructively, a natural tendency towards a further perfecting, arising directly out of the structure's own activity giving multiplication of effect. No other reason can be assigned for this, but that every organisation, reckoning its due environment as being operatively part of it, has a self-effectuating character, and exemplifies a fundamental law which may be called that of cumulation of function. Instances might be given in every kind of organisation.

The point may be restated thus: systematised physical activities, merely by the necessary inter-arrangements of their most fortunate-occurring setting up greatest consentaneity,—this naturally implying prolongation of reactions in the organism and consequent multiplication of cues,—tend to an enlargement of the possibility of activity hereafter, so framing better operations in advance. It is obvious that Evolution would have no working-principle but for this; for if that doctrine points to a final equilibrium, such state can only arrive after, and, in fact, by means of, the culmination of inter-activity.

In the physical-conditioning of the mental experience, that is, in every case of cerebration, the same law is necessarily borne witness to. The neurotic-diagrams, by the interchallenges of the infinitesimal elements of their groupings, start the conditioning of conclusions in the Reason and of images in the Fancy, the result in both cases being somehow in excess of the facts of prior experience. It is alone owing to this that Reason and Imagination come to be recognised as faculties. The problem, therefore, is this,—where does that natural process stop,—what is there in the moral experience answering to it,—to what length may the process in that higher region be relied upon?

This question as to Faith must be answered, like every other, on its own evidence. But all the drift of

the inquiry goes rationally to show that it is to the men who have carried the experience of this present life to its highest point of complexity, as generally demonstrated, in spite of partial mistakes, by good results being seen in their practical conduct, that we must look as the greatest authorities in this final matter. If there be any premonitions of a further evolution of Nature in man, the individuals who are living to the full extent of the developement of the egoistic-actualisation challenged by this present state, may be expected first of all human creatures to perceive in themselves the responses to what we may term the elemental-influences of the prospective finer sphere. Those among them who have ripened most in loving goodness and in practical wisdom are likely to feel such embryonic-motions the most distinctly. Some indications of this natural process might, however, be looked for in all of us: in the last chapter, by a brief hint or two, an attempt was made to put certain of them in evidence.

The further general considerations now above offered would appear so far to account for a common, rudimentary stirring of Faith showing itself in human experience in vague longings and indistinct analogical suggestions, such as those instanced in speaking of the "Soul." But the chiefest of the class of special men just hinted at have essayed articulate utterances as to matters far transcending ordinary

experience. It is here that the difficulties begin to arise. In what mode are we to conceive of these men apprehending the alleged higher verities, and in what way is it possible for them to communicate such revelation to others? These points of the inquiry evidently ask examination in detail.

§ 2. In what mode can Dogmatic Verities be Apprehendable?

If it be asserted, on the ground of some hints given in the chief records of these seers, that they, in a way of trance, vision, ecstacy, had actual enlargement of experience in modes answering to what we in respect of this world call sensory, so finding themselves with the full proper awareness in every conceivable kind belonging to another wider scene and to intercourse with higher personages, that plainly is a statement which can only be validated indirectly for all those who have never had such widening and heightening of experience. In fact, the first duty which common-sense imposes upon all the rest of men is to ask, if there is any subsidiary evidence to show that their fellow-creatures by or for whom these claims are made were not suffering illusion? Even if it should be urged that some of the reasoning in the last chapter as to the existence of a finer, inner organisation in the human conditioning-apparatus, and as to the demonstrated knowledge that there are other scenes in

the universe besides this world, lends itself to the possibility of such a happening,—since what would be required for enlargement of experience would only be an anticipatory use of the more subtle apparatus in effective response to some of the more rapid interquantifications proved to exist in the cosmical Executive System,—still the fact of abnormal cerebration occurring at the lower level rests on grounds far less suppositious than that hypothesis; and, moreover, the reasonings just referred to, when pushed to the utmost, only seem to indicate that the inner-organisation is germinal and rudimentary, while analogy drawn from this life suggests the need of graduated-habituation in its use. Besides, these special individuals for all purposes of intercourse with us have to descend from this higher region. They are, when communicating with their fellows, back in the state of conditioning given by the common interquantifications of the mundane executive-operations; and even if it should be thought possible that they may in their own sentiency, by this advanced developement of the inner-organisation, combine certain of the higher conditioning-interquantifications, so retaining some awareness, though dimly, of what has happened to them, still the question remains, how can they make themselves intelligible to the rest of men who have never transcended the common limitations of experience?

It is incumbent at first to state in a blank and unqualified way the objections which can be urged alike against the possibility of anyone apprehending the alleged verities of Dogma and the practicability of a revelation of them to human beings at a lower level, even if it be supposed that special persons, raised to a higher range, had such enlargement of experience. But on looking at the matter a little nearer, the suggestion arises, that even ordinary human wits are a little sharper than the above first statement of the case credits them with being: the mind of man finds itself fully able to reason analogically, to understand metaphor, to ideate by means of simile. Further, it must be borne in mind, that although it is true that what may be called the final, sealing article of Dogma,—namely, the existence of man in a sphere other than this world,—could only be actually warranted by one who was able to say that he had anticipatorily had the experience, the rest of men having to take it from him on authority, yet the broad general allegations of Dogma, which are alone here in question, do not, when stripped of the gross corruptions arising out of a grievous political misuse which has been made of Religion, rise to the height of unintelligibility above taken for granted. All the problems to which they purport to give solutions are actually framed with more-or-less distinctness in ordinary life, at the common

level of moderately-civilised experience ; for no sane-minded human being above the lowest savage stage has any difficulty in understanding such questions as these—whether there is a Personal Ruler disclosed in the scheme of things,—whether there are any grounds* for suggesting hope of a possibility of existence after our visible cessation here,—whether it is likely that the ills of this life will be redressed and vindicated in the individual case hereafter ? The subject-matter of the great dogmatic issues is, in fact, found in the daily stuff of our usual life, and it does not task human faculties too hardly to apprehend affirmative or negative answers as to them. The real difficulty is not on the score of intelligibility, but on that of final authentication,—a point to which we will return directly.

The questions themselves being, in the above ways, framed in the common experience, then, if there be a mystical faculty in the Ego, it is conceivable, following out that supposition a step further, that the Ego may exercise itself upon the problems in a way of aspiring befittingly in response to certain Hypothetical Assumptions in the respective cases,—so getting, in the ultimate region of consciousness, fresh starting-points of Conduct, the aspiring-egoistically in respect of any such Assumption being what is meant by an act of Faith. These Hypothetical Assumptions, religious men affirm, are actually verifiable in

Conduct, though, from a fundamental necessity in the case, the verification can only come after the Ego has itself, by a rudimentary act of personality, made the assumption to the extent of aspiring in a manner of expectation in relation to it; this potentiality being, indeed, what constitutes man a person, and being in itself vouched for by the general style of his experience. It is, let it be added, of the very essence of the religious hypothesis, that in this act of Faith, man, by a gracious helping of the Holy Spirit, practically regains somewhat of an alleged historic forfeiture of that prerogative of personality.

It does not seem to be practicable to carry the reply to the inquiry at the head of this section much further than this. In so far as authoritative teaching of what is above termed the final dogmatic verity,—viz. that of existence outside the limits of this scene,—is understood to have implied anticipatory-enlargement of experience by what, in comparison with common cases, may be called a premature developement of actualising-faculty, it is a matter too special for any avowedly non-dogmatic inquiry. The same thing has to be repeated in respect of all the alleged verities relating to matters which have happened elsewhere and prior to this world. But a further remark clearly offers itself in a way of deduction. It seems to be certain, that, in attempting any detailed revelation of that alleged

extended experience, those to whom it was affirmed to have happened must in their statements have recourse to metaphor, parable, simile; and, further, if a kind of helpfulness towards intelligibility in that direction is given by all men using metaphor in respect of their present sensations more-and-more necessarily as their experience heightens, the very circumstance lends itself to the likelihood of some historical transformability of statement in respect of Dogma coming from time-to-time to be requisite. This is a point of importance to which it will be necessary to return. Perhaps, too, it should here be added that it is open to religious men to say, that if the extent and the definiteness of the original affirmers of Dogma seem often too great, it has to be remembered, that, in treating of Will and Conscience, it was pointed out as being the belief of all dogmatists that there is a golden moment of free living in the higher experience, owing to a positive addition of energy. It is in that inexplicable time and scene, where an act of creation is performed by what Christian doctrine calls grace, that the detailed disclosures of Faith are said to take place. The question raised in the first part of the discussion, consequently, is really this,—who is to place limits to the possibilities of private experience? The other issue, as to the authentication of such claims, can be more openly handled.

§ 3. The Canon for Preliminarily Judging such Claims.

Obviously, it would not be enough to close the inquiry into the possibility of Dogma for any man to say that these phenomena not having occurred to him, they cannot happen at all. What he may fairly ask beforehand in trying to settle the probability or improbability of the case, is that there shall be shown some difference between himself and the specialised-individuals; such difference agreeing in character with what it may be supposed the kind of causation would be for such added phenomena. Living this life at a fuller stretch of activity and complexity would, as already pointed out, necessarily be of the nature of the causation to be looked for. Any man who is convinced that in his own case Temptation has occurred as largely, and has been decided as successfully, as in the career of the great characters who have affirmed the mysteries of Faith, and that he has, consequently, carried the developement of the facts grouped under the names Conscience and Will as far as they did, attaining to the same purity and elevation of egoistic-actualisation, will be clearly justified in being sceptical as to those affirmations if he does not find any corroboration at all of them in his own experience. For such a man would be wise enough not to look for revelations actualised to the same extent, recollecting

that unless the course of things had arrived at a juncture when a fresh prophet was needed (which is a point which no man can decide), merely comparative-abatement of the anticipatory experience would be accounted for. If, on the other hand, he always perceives himself nearing those beliefs as he heightens the delicacy of his own egoistic-experience, that obviously is a circumstance of much suggestiveness.

But is there, in addition to this subjective judgment, any canon which can be objectively applied in deciding upon these claims? It is easy to say, in a general manner, that Dogma must find its necessary verification in Conduct,—that the practical test of these beliefs is whether or not they ameliorate the feelings and aid our doing and our suffering in life. The greatest religious teachers—and notably Jesus Christ—have appealed directly to Conduct for such witness to the truth of their dogmatic affirmations. But the statement as just given, though it can be seen to include such a practical rule as we are seeking, adds to the observance of outward results a mixture of subjective appeal, and the modern scientifically-habituated mind wishes that element dissociated. A hint of a purely rational canon is, however, to be found in what is above said of this life being lived at a fuller stretch of activity and complexity. All that can be done is to try to

formulate this rudimentary suggestion. Perhaps, the principle may be broadly stated thus :—

Any dogmatic affirmation the acceptance of which directly points to, and is followed by, increased versatility of mood in the person accepting it, and the influence of which is traceable as leading to additions of helpful social-effort among its believers regarded inter-relatedly and as belonging to the general community, in so far vouches for itself as being on a line of natural progressive evolution,—the finer, more complex behaviour, in fact, bearing direct witness to a further instigation of activity in-and-by improved structure.

To apply this principle of criticism to particular articles of belief is not within the plan of this book ; but it appears to be a practical rule awaiting application, and to be the only one that the case admits of.

It must, however, not be omitted further to recall the fact that in the pre-scientific times, a very crude, but at the same time, if only it could be got, a very conclusive verification of a practical kind was popularly demanded,—the men announcing dogmata, or even those holding and practising them highly, were required to perform miracles. Modern Science emotionally protests against this supposition, which is, indeed, one to be scrutinised relentlessly. It is fairly open to religious believers who think they see any

prospect of usefulness in insisting on a point so embittered by controversy, to urge, that there runs through all the reasonings in this and the preceding chapter, an assumption to the effect of a finer inner-apparatus largely coming into play in the case of these special men. They may logically ask, if they can only first gain acceptance for the premises, whether that apparatus may not work additional executive-effects? But it is patently impossible to give any intelligibility even on that hypothesis to some of the most detailed cases standing on the record; while, on the other hand, the application of the above more moderate testing-rule to ordinary Conduct gives the needed verification,—that is, if the dogmatic beliefs can be made out to instigate greater versatility of mood and more complex social-activity. The formal controversy on the other point is still more entangled when we remember, that, in answer to any such question as that of why these alleged events outside the common order are not now to be witnessed, it is possible to give grounds for supposing that the present condition of Science is not favourable to a high developement of the spiritual experience,—a certain persuasion which Modern Science induces of a possibility of modifying man's lot here throwing temporary difficulties in the way of preserving the old wide generalisations of thought and feeling respecting human fortune which are re-

quired for that experience. This last remark will be followed a little more into detail later.

But the work of the Reason in reference to Dogma only begins with the framing of a general canon such as the above ; let us now go a step further.

After what was urged when inquiring into the Will, as to the present rudeness of the mathematical analysis and the possibility of the alleged additions of energy being exactly compensated in this world's system, it does not need repeating that at present Science cannot deal with the infinitesimal quantity of fresh force needed for the physical-process of the phenomena of Faith.

§ 4. Rules for Criticising the Dogmatic Averments in themselves.

It may first of all be repeated that, if the possibility of Dogma be accepted, still a certain historic-transformability of dogmatic statement can be seen to be unavoidable and necessary as knowledge of our own process and that of the world progresses. But if in what may be termed the functional-activities of Conduct, a Hypothetical Assumption answering to the earlier formulatisation positionally and numerically is continued, and is seen to subserve a practical use in consciousness, the modification of the intellectual rendering of it is not a real discrediting of the dogma.

For example, the belief in a personal Spirit of Evil contending with the Holy Spirit in influencing man is gradually weakening before our eyes, but the question is, whether the new conception which the intellectual-apprehensions now being framed by Science offer respecting the conditioning-mode of human experience subserves the same functional use? If we have to recognise defects in the egoistic-actualising structure as the means which operate the promptings of wrong appetite, collectively named Temptation,—these having to be overcome by mystical-aspiration,—does not that vindicate the old belief substantially, a completed technical explanation of the prior form of the doctrine being given by what is made out in an earlier chapter as to the inter-variability of the egoistic and non-egoistic limits in the cerebral conditioning-activity,—a certain degree of failure of the higher brain-process, as we then saw, necessarily starting in our cerebrating the cues of a second person? Rather might it not on such grounds be argued that the fact of Dogma being seen to anticipate the later scientific-conclusions by its earlier formalisations, the statement of them exactly answering to the ruder mental-state of the men among whom they arose, witnesses to its being, irrespective of mythical accretion, a natural method of the explication of human experience, showing historic advances from time-to-time in special individuals?

But it may be as well to take another instance. The doctrine (necessarily using the theological terminology) of punishment for Sin has been—it in many quarters even still is—accepted by the human intellect in a form so coarse as to represent it as being necessary for the vindication of a certain character attributed to Deity, and also as required for the purpose of a standing memorial to members of the human race, and possibly of other creatures, that impenitent offenders should throughout eternity offer a spectacle of unabating torment. An increasing number of those holding dogmatic beliefs are progressively mitigating the interpretation of this further tenet of their creed. It is seen that in proportion as an ameliorated working-conception is got of the possible blessedness of a future improved state for some, you may relax this demand for the others to be kept in existence as visible exemplifications of punishment. To survivors in a condition of felicity which was sufficiently prized, the knowledge that some who might have shared it were not doing so would be impressive enough for all practical ends, while the fact of a Supreme Bestower, so beneficently willing to grant blessedness in their own cases, having blotted out any of their fellows, would effectively give any vindication which can be imagined to be needed for the delineation of His character in the eyes of His happier creatures. In other words,

again in this example as in the one above instanced, it is apprehended that the Hypothetical Assumption can be numerically and functionally preserved along with a great change in its intellectual rendering.

This acceptance of the possibility, and, it may be further said, the probability of a historic-transformability of dogmatic statement, seems to be the first general principle to be here laid down ; but the whole function of historic criticism has to be added. Some of the more detailed rules of that criticism are very obvious.

For instance, any disagreements among the prophets are to be noted, not ignored ; all questions as to the authenticity of the record of their teachings, and of corruptions officially brought in since, should be fully entertained. It is to be expected, from all we have seen of the subtle modes of getting higher economy in human affairs by mixtures of discrepancy and perplexity, that there would be only partial adequacy of record, and also that official corruption would arise. It is in this way that the occasions for the activity of the Intellect are formally provided, and that each man is forced to use his own powers in a manner of moral behaviour. Further, as has already been urged in some detail, the rule generally to go upon in deciding the comparative authority of the spiritual teachers, would evidently be that of the complexity of their general experience. It agrees with

every conclusion suggested in these inquiries, that he who had attained greatest versatility of mood, in other words, highest purity of heart, would be likely to be nearest the true phenomena of Faith. Also, it may be supposed that in so far as there was coincidence among these special men, in the points to which this agreement related there would be corresponding decrease in the likelihood of error.

Already we have disclaimed any intermeddling with dogmas in detail, but on two points all men avowing spiritual experience consent more-or-less, though the formulas of the beliefs in some of the very earliest teachers had little articulateness. They affirm that, at a certain developement of the heightening experience, they found themselves in the transactions of their own most private affairs having intelligibly to do with a Supreme Personality, and, further, they say that a persuasion necessarily arose in them of a life hereafter for human beings. Passing now from the above special rules to a general, wider examination of the subject, it is clearly open to us, by a large presentation of any facts Science has established, to seek to get indirect proofs in these alleged matters of Faith. Let us take the two great topics we have just instanced, in the order in which they are named; and, in dealing with them, we ought to find an explanation of the rise of modern Scepticism.

§ 5. *The Genesis of Modern Scepticism, and the Conception of a Supreme Personality.*

What is it that has caused the modern type of doubt as to ourselves and what we witness deriving primarily from a Personal Source? Undoubtedly it is the recent rapid progress of Physical Science. Along with its discoveries, and clearly arising out of them, there has happened this striking abatement of the higher emotional-conditioning;—for, we suppose, it has to be admitted that scientific scepticism in reference to the old religious beliefs has lessened the complexity of some of the feelings. It is allowed by those who have been led to see a delusiveness in such hopes and fears that they had an operative value—a practical validity; and some of the wisest of the later critics have, indeed, set about framing substitutes for this lost emotional-conditioning, formulating a Creed of Humanity. But the point already briefly hinted at, and which we wish to urge here more fully, is this—whether the abatement of emotional-sentimentality does not, when regarded in itself as a phenomenon which must be specifically-caused, indicate that the intellectual-activity has itself recently simplified in the very widest generalisations it ultimately offers as to the world and the human lot? The brilliant progress of Science during the last three generations in accumulating detailed knowledge of

many of Nature's processes, and in applying this knowledge to practical purposes, does not, it is true, popularly give that impression. But it must be borne in mind that the issue here raised carries us a stage further back than that popular persuasion,—it asks a critical judgment of the final generalisations under which the world is regarded in connection with man's fortune: for it is not difficult to see that the necessary effect of discovering a multiplicity of new details as to executive-processes may be to disturb those generalisations. It happens that the question, which is strictly one of Psychology, can be followed into some detail. What we are now seeking to decide is, in fact, whether the obscuring of the conception of a Personality existing somehow in respect of the universe is not owing to our apprehension of the world having recently lost some of its complexity; and, further, whether it is likely that the human mind, when it again sees in the universe intricacy of activity above a certain limit, will be able, in pursuance of its own laws, to avoid reframing that old conception? These are the two aspects of the problem now to be considered.

Certainly, no one who is instructed at all in these subjects can fail to perceive the numerical deficiency of the Laws of Nature as they have as yet been discovered, compared with the total phenomena of the world? The rules of molar activity have in part

been brought to light; but how little is known of chemical and electrical processes,—in fact, of the modes of most of the molecular phenomena! Well, let it be noted that at every step of advance in the knowledge we shall find the universe disclosing a subtlety of activity, a fulness of operative-response, an adequacy of inter-relations, which will constantly approach more-and-more nearly to a mimicry of what we understand in our own private experience by personality. It seems nearly certain, so far as any prospective judgment can be formed, that when Science has explored the working of the world more in detail, the behaviour of the Cosmical-Energy, so inexhaustible in its play, so like spontaneity in the fineness of its balancings, will necessarily make that Energy present itself to man in the aspect of a marionette, if not of a real being. Psychology, we repeat, must ultimately decide alike Scepticism and Faith, and if the rise of the former can be psychologically explained as being caused by a decrease in the complexity of our experience,—an ill, though unavoidable and necessary, temporary simplification of thought and feeling,—then, in that case, Science may cure Scepticism in the end, just as it has produced it now.

At any rate, this may certainly be said, that the present stage of Science, owing to the fewness of the Natural Laws we as yet know, supplies us with a

general conception of the universe not beyond our modernly-obtained ideas of machinery. These very ideas, in fact, give the analogy which now rules in our most generalised apprehension of the world. Scientists seem to suppose that they will be able always to retain this mechanical conception; but that is just the point to be proved. Suppose that it is not in the nature of the human mind to do so! Machines at present do not perplex our notions of self-prompting, do not conflict with them; but if we could imagine it possible for them to go on perfecting in construction till they acted and reasoned, showed affinities and non-affinities, with more readiness than ourselves, how could we maintain the idea and the feeling of mere mechanism in reference to them? The analogy of our own being in its inner experience, must, in spite of all that we had imagined beforehand, then come into play. It will naturally be replied that it is ridiculous to suppose man will ever make automata exhibiting what would have to pass for spontaneity. Just so, but the fancy may be used as a psychological illustration. For it seems absolutely sure that, if Science continues to progress, there will come a time when this display will really happen in the case of the world itself. Man, according to all the forecast which is feasible in the case, will apprehend the ceaseless, ever-varying activity of the universe to an extent and in a way of fineness which, so far as

we can now judge, will make it impossible for him, without some unimaginable increase of stubbornness of feeling, to preserve the idea and the feeling of mechanism in reference to it.

It can hardly be doubted, we repeat, that scientific discovery has down to the present stage of it had for one of its natural effects the lowering of our finally-generalised apprehension of the world to the narrow, rude limits of the few insufficiently-connected Laws of Nature yet made out; and in this stage man has a little emotionally-intoxicated himself with the audacity of denying Cosmic Personality,—either, that is, as existing in the world or as being somehow connected with it. But if the above Psychology is right, this atheism cannot be lasting. The organisation of the human mind, *unless it can cease to give the conception of personality as applied to man himself*, clearly ensures that the present state of sceptical experience can only exist pending further advances in our apprehension of the multi-form-activity of things, and so soon as we are habitually aware that this exceeds the conditioning of our own self-feeling, the Law of Analogy, which is the basis of our Reason, will compel a change of idea and emotion. In other words, Science seems to be steadily marching towards a stage when men, unless they believe in a Being above Nature, must feel towards the Totality of Things themselves as

towards a Personality; that being the necessary form taken by their final generalised-conception in developing its own intelligibility,—obliged to it by a fundamental law of mind, illustrating all else from man's own nature. Under no other form, so far as can now be made out, would the final idea of the Cosmos then be intelligible to man. For it does not seem open to scientists to suppose that, while yielding perforce to this as a perceived superstition, they could keep a secret consciousness that the world was, after all, machinery, and that it was an illusion to regard it as a Personality. That could, at most, only endure for a moment now-and-again, when their faculties were not fully acting. The human mind clearly cannot transcend itself; and its powers, under this despotic sway of Analogy, seem only to permit it to deny Personality up to a certain early, comparatively rude limitation of mechanism, which the detailed activity of the universe, when it is fully apprehended, is certain far to exceed.

Also, it may be pointed out, how very little of an addition to experience so framed would further transform it, and would reasonably make that apprehended Personality a high and dear reality. One iota of added energy received in response to an act of the alleged mystical-aspiration in the Will would prove to everyone blessed by it that

the Personality was not in physical Nature, but was somehow above and beyond it,—was its Cause. This is all that is needed to vindicate the law of mind above posited from any charge of illusion, and to convert the Scientific Pantheism into a Spiritual Religion. But this addition of experience spiritual men affirm that they have. Supposing this to be true, the conception of the Supreme Personality then follows the analogy of man's moral nature, not merely the law of the Intellect. Love and Wisdom are seen to be sufficient causes for anything; and collocation, rapidity, proportion, etc., events worked by laws, are natural means for varying existence progressively, as we see it varied. It is clearly open to the religious man further to ask, whether it is not alone in this act of Faith that the human spirit finds fulfilment and ease,—an ultimate ability being exercised in it? He may fairly urge that a joy of assent to the possibility seals the hope, witnessing that this is the final co-ordination of human nature. If it be said that this evidence is insufficient, he may still answer that it only fails with those who are without it.

But it has yet, finally, to be added in connection with this matter, that such ideas as Infinity and Eternity are not the generalisations of Faith absolutely: there appears to be a higher one subordinating those, got analogically from man's

egoistic-experience. They are, after all, in the style of mechanical-conceptions, and are, at the last, stultifying. That which according to the religious hypothesis is the true generalisation, the comprehensive idea, in which the spirit finds its natural freedom, is one to which they have only an occasional relevancy;—it is that of absolute Potentiality, explicated, not limited, by Wisdom and Love,—the executive-limitations we name Space and Duration being, in the scheme of our life, among its options and its creatures. Language has not full competency here; each one must piece out the defective expressions as his most private incommunicable experiences enable him.

§ 6. Bearing of the Discoveries of Physical Science on the Doctrine of a Future Life.

Let us turn to the second point named above,—that of Future Existence. If Faith, taking it in its lowest meaning, is the anticipating of natural facts of future experience in a way of evolution, Science as it progresses in acquiring the details of the cosmical-scheme should offer some corroborations of Faith's previsions. Is it so in this matter? In attempting to give the answer some repetition of parts of the last chapter is unavoidable.

The reasonableness of death, in the sense of a mere laying down of this body, is, in fact, made

much clearer by Science. It is easy to see that the constitution of the human physical-frame is only adapted for a certain range of place; its dissolution, if man could survive that, is a necessary requirement for any considerable enlargement of his activity, fitting him for greater distances and rapidities. Man could not journey to the earth's nearest neighbouring sphere, the moon, without first putting off the present frame; we could not in this world, or in any other, follow in any way of sensory experience the molecular-processes of matter prior to some such refining change passing upon us. The old difficulty of invisibility and impalpability after such disembodiment is really a childish ineptitude, now that we know what we do of the limits of our present senses, and of the degree in which the rapidity of many of the elemental-forces exceeds those powers. An organisation fitted to exist in a region where the general rate of executive-operation was set at the speed of electricity would necessarily be invisible and impalpable to the present senses of vision and touch conditioned by the existing human body. For even if the being was not in transit, the organisation to which such speed was at any time possible must have a subtlety for which our only description is attenuation carried to a degree which would make it inappreciable by our present organs.

The case may, therefore, at least be put thus,—As

a matter of proved fact, we know that the universe extends, in both the molar and molecular modes, far beyond our present range; it is a strictly scientific deduction, that before we could have the franchise of distances and rapidities larger and quicker than those of the lower, that is, the molar physics of this world, we must lay down this body,—a much finer one being required for following the molecular-processes of matter here even; and that, consequently, it is understandable that all creatures having undergone such a change, or being fitted primarily for such wider existence, must naturally be invisible and impalpable to human beings in the mortal state.

It is possible to state the conclusions somewhat differently. Matter, defining it as a system of existence made quantitative by the cause proportionately passing into the consequence whenever phenomena develope,—the total sum of what subsists being in that manner strictly fixed,—is, in some specific set of modes of it, the appropriate scene for a created being, who it would seem could only in some such way be limited; but Science, by means of artificial-apparatus and a technical organon of hypothetical-calculation enhancing the sensory-powers of the physical organisation, has given us the significant knowledge that the actual processes of Matter are not fully apprehended by us in the present body, and that

this universe offers by its own already existing properties other scenes, which are not yet inhabited by us, suited to us if we had an embodiment of elemental-structuralisation more subtly akin. We cannot even dream what conditioning of further glories of sensory-experience as well as possible intellectual triumphs, with consequent widenings of moral experience, might for instance lie in sentient-cognisance in respect of the modes of chemical affinity and the action of the higher elemental-forces for which the only name we have in the way of general description is the Ether. But, at any rate, we know through Science that these modes exist: a further world is no longer hypothetical,—it demonstrably subsists about us.

The advantage of these considerations drawn from Science is, that they enable us to perceive more clearly that such a change as that which death implies is reasonably within the necessary provisions of a scheme of Nature which is progressive, and that other scenes of possible existence for such a being as man are already in readiness. As hinted in the chapter on "The Soul," it would seem to require only that in the course of this life the Nervous System by its ultimate-habitudes should frame in embryo a finer organisation, and that this, in the moment and act of death, should be disentangled from the coarser frame.

§ 7. Final Statement of the Case.

Further than this, we cannot reason subsidiarily about these matters from our present premises of common facts. We have to rely upon the agreement there may be between our higher, verbally-indefinable experiences and the affirmations of the special men who tell us that it has been apprehended by them in some heightened, more explicable way of Faith that such things not only are, but that they are included in our destiny. What further corroborations Science may some day give us, we may calmly await. Each day, each hour, it is improving its state, and will necessarily lose more-and-more of its present rudeness and hardness.

We may now go on to consider the large question of the Organisation of Experience.

CHAPTER XVI.

THE ORGANISATION OF EXPERIENCE.

§ 1. The Principle of Virtue.

IN the first place, a word is needed as to what may be called the principle of Virtue, giving the fundamental rule for the right Organisation of Experience.

If was stated earlier when the subject of “Conduct” was being dealt with in a merely general manner, that the gain of Virtue lies in its giving enlargement of the egoistic-diagram proper. That is a very technical statement of the matter. The view needs putting in another way, somewhat widened, so as to take in the external consequences of the behaviour as well as its internal effects on the individual. Virtue, then, as a necessary part of its success, must not only render enlarged egoistic-consciousness at the moment, but it must executively provide future occasions for itself better than Vice does. It will be seen, as we go on, that a man living in society with others of his kind cannot act in that way without his Conduct being the best, also, for his fellows. The fuller consideration of the point, however, may be postponed for a moment. .

The general conclusion of all our prior inquiries, alike into sensation, morals, æsthetics, and religion, is that progress in human experience means complexity. If the cases admitted of direct observation and strict reckoning, there can be little doubt it might be said that one neurotic-diagram excels another by the greater numerical quantity of co-ordinated fibres acting* in it, simply and metaphorically, in effective simultaneity and succession; for multiplicity of active-fibres we have seen is practically one and the same with a large, prompt, easy egoistic-actualisation. It is the operation of the conditioning-apparatus which necessarily settles the extent of the inner egoistic-diagram,—being, however, according to the religious hypothesis, in the special moments when the Will plays mystically determined by it in turn. Simple Pleasure, we further made out, is the result of aggregation of identical-impression; compound Beauty, in every department of its graciousness, owing itself to the addition of the other harmonious ratios of the nervous areas grouped in association. The solemn mysteries of the Conscience, too, in pursuance of the previous reasonings, know no other rule. Its pains arise from disintegration of experience; its highest miraculous joy, that given in a successful exercise of Will, has its warrant in a belief of supra-physical increase in the energy acting.

It is perfectly true that we are without means

of direct observation of the apparatus in this interior-activity, and are also lacking in estimates of the emotional-experience sufficiently refined for making representative-calculations in cases of Conduct, but we seem to be able to get at the result indirectly, by affirming, as above hinted, that the principle of Virtue is disclosed in practice to mean the multiplication of consequences. It will be found that, in every instance of rightly-adjusted Conduct, more possibilities of future experience, reckoning in a man's fellows as well as himself, flow out of the activity than would do if the behaviour had been the opposite. Selfishness, in every form of it, points to a progressive narrowing, and ultimate extinction, of all social-activity consequentially arising out of the deed. On the other hand, self-sacrifice creates all the large possibilities of social experience, spreading its reduplications more intricately at every successive stage. Something will have later to be said on the question of Utilitarianism, but it may be mentioned here that Utility is clearly the standard of Virtue to this extent,—that the widest practical tendencies of things and the greatest total of individual sentiency in the human beings concerned in them, taking the future into account as well as the present, must go together. On the enlarged scale of the community, nobody can fail to see that Civilisation—in so far as it truly civilises—gives this

multiplication of result, this increase of Conduct and Occasion, this heightening economy of energy in developing inter-consequences; and everyone can perceive that Civilisation is itself the product of a right fulfilment of ever-enlarging intellectual duties.

Ultimately, it comes to this, that Virtue, like everything else, is a case of the great Law of Causation, the natural operation of which is, to a certain limit at least, to give cumulation of effect. Extension of consciousness, by increased co-ordination in the present experience, with the multiplication of future occasions practically resulting from it, is a technical description of the only human good,—our progress consisting in it, and necessarily developing from it.

This wide preliminary survey of the subject does not directly help much; but the truth is, that the practical question of what may be termed the Art of Conduct can only be approached in a roundabout way. The course most profitable in the end will be to first exhaust the general remarks which the topic suggests.

§ 2. *The Higher Experience is Ultimate, not Primary.*

Simple as the above first statement of the matter seems, some of the practical bearings of the principle have as yet been only very insufficiently recognised. It follows from it, for instance, that the alleged high

spiritual experience is not, as has been too much thought, the primary, but the ultimate, experience. It has to be added here again, that some of the great Christian teachers fastened on the fact, and emphatically preached *edification*. A detailed application of the view will show that purity of heart means not ascetic absence of sensibility, but a wisely-obtained finely-controlled multiplicity of feeling ; activities of the higher-structuralisation rendering occasions to the Will so light and full of options, that the tyranny of desire is lost,—that is, Conscience is fulfilled and enlarged from moment-to-moment, by unfailing substitutions of mood. Only in this way can the fitness of the higher, the religious sentiency in the bulk of men be explained. Those Emotions seem to be as certain and as exact as all other feelings when the conditions of them exist,—only, instead of being the simplest, they are the most elaborate experiences we have. A very intricate adjustment of the conditioning is asked for securing them ; one which just now only a decreasing number of men have the permanent habit of, and to which, as was mentioned in the chapter on “Faith,” and as we will show more in detail immediately, Modern Science, at its present stage, is not favourable.

For the beginnings of this larger Organisation of Experience are, primarily, made for us, rather than by us, in the occasions which the general causation of

the world into which we are born offers at that particular historical juncture. Above it was said that Civilisation, viewed on the scale of the community, showed in its modern advances cumulation of effect marking progress. There can be no doubt of it if you only confine your observation to a certain lower range of experience. But this important qualification has to be added, that the forms of sentiency which have been ameliorated by these improvements in individual bodily comfort and in the quickening of commonplace social-activity, are only intermediate, and at most second-rate, co-ordinations of consciousness; and that a certain disproportion of temporary exaggeration in them at present injures, in fact, the large precise generalisations on which the very highest, most elaborate sentiency depends. This is a point which earlier, in the chapter on "The Soul," we undertook to try to make plainer at this stage, and for that it is necessary to follow further but in a rather different way the reasoning used then.

§ 3. The Conditioning of the Religious Sentiency.

In order to the experience of the religious sentiency in even its rudest form, there is needed, according to the above statements, a comprehensive-apprehension of the human lot, as it sums itself up in a certain final aspect of life. How this is provided for fundamentally in the fact of the Ego itself

being merely occasional, and, again, by the historically-acquired conditioning structure requiring a world to give it its cues, at least periodically, was hinted in a previous place. Those considerations, which may well witch men with a deep wonder of awful gratitude at every resumption of themselves, have never yet, in their strictly scientific forms of statement, entered into the popular thinking. But mankind has always had a meditative conception of the course of mortal fortune suggested by more obtrusive facts. There has, in these meditations, been present to the mind of the human being, either in a directly-conscious or else in some secondary way, awareness of the involuntariness of birth, the inexorableness of the allotment of man's position in life originally, the power of time to work decay on his frame and faculties, the uncertainties of Pleasure and Pain, the absoluteness of death. For the higher spiritual experience something more, it is true, seems to be needed,—a rejoicing in some blessedness seen in life, and a prophetic stirring of Faith, amounting, taken together, to a sense of a personal dealing with the Supreme; but at this first stage we are dealing with the matter at its lowest level.

Is it not patent that the above thoughts are the widest generalisations of experience we have? They challenge all our reminiscences for their full illustration; a man is stirred by them throughout his whole

faculty of sentiency; while they are present, the mind is acting in the most intricate adjustments possible to it. Is it wonderful that a specific Emotion in advance of every other known to us should then arise? It only remains, while the complexity of conditioning-activity lasts,—appearing, vanishing, reappearing, just as that does. This large awareness of the general bearings of our lot is not, let it be said, nakedly-operative upon the minds of individuals; it takes a colouring from the cosmical-doctrines of the great teachers of the respective peoples. The views which popularly prevail as to Providence, as to the purpose which the world has, and the probable issues of this life with respect to future existence for ourselves, mostly run into, or rather derive from, specific dogmas. The abiding sentiency framed by the generalisations which the events of the human fortune force upon men may in this way be very widely different alike in races and in individuals. It is a large subject, and one which cannot be attempted to be discussed here in any way of historical illustration.

What we are iteratedly urging now is that the recent developement of Physical Science has interfered with this generalising-process itself, and that it may be supposed the main religious dogmas have consequently in the case of certain men fallen into desuetude for the simple but very sufficient reason that there have been special interferences with the higher-

cerebration, stopping the thinking operations of this fundamental kind needed for the conditioning of the beliefs. That comprehensive mental-activity itself, we repeat, seems now to be more infrequent and less complete ; the point to be determined is, whether it is so because several of the above constituent-generalisations are disturbed and obscured by the present stage of modern knowledge? The way in which Science now aids us in enlarging the possibility of personal activity and range, in adding to bodily comfort, in combating disease, in lessening pain, in prolonging life, has put the old conception of the human condition into a state of flux. Man has more-or-less lost clearness in the perception of the limits of his lot. The suggestion is unconsciously always present with us, that a little more progress might change, modify, lighten, remove those limitations further-and-further : what now happens in these final matters of human destiny seems to occur in the precise way in which it does now occur because we have not attained another step or two of knowledge or of power. Of course, this is a delusion, and, in lucid moments, we know it to be such, but for the greater part of time it imposes upon most men, causing the portentous fact of Modern Scepticism. By-and-by, when the intoxication of this sudden enlargement of self-appraisement has weakened, and men again see with full distinctness that what has happened is not

any alteration of the ultimate conditions of our lot, but only a widening of the area within them, and a little softening of the bleakness of its air, they may reconstitute the conception of the human destiny in a better fashion.

In the meantime, in order to understand the emotion-producing power of the old more complex conception of our life when it does exist, we must look to those in whom the constituent-generalisations survive in some degree, or in whom they can still be evoked. In all such cases they still show the ancient potency. If among the scientifically-ignorant, the ill-dispositioned, some of these highly-generalised apprehensions can be stirred and be made to co-exist permanently in the mind, the specific Emotion, in however grotesquely superstitious a form, arises, and no marvels of reformations of character and life are too great to follow.

§ 4. *The Individual's Right Organisation of Experience
Roughly Prescribed in "Duties."*

It seemed necessary to instance this large, world-moulded Organisation of our Sentiency as completing the preliminary view of the subject, and also for the sake of its striking scale as illustrating the conditioning-process. But within this Organisation there has to take place another far more particular, a busier, if a humbler, one, for Conduct to be rightly

adjusted and life successful. Education in the ordinary meaning is of course assumed; its absence is an incessant disqualification of the individual: but that point is now so well recognised that it need not be dwelt upon; we may go at once a step further.

The theoretical Organisation of the Moral Experience is roughly recorded for us in the list of recognised "Duties," which are generalised names for the neurotic-diagrams which ought to arise and to have effective sway on-and-in the specific occasions to which those hypothesised-obligations refer. The general effect of these duties may be technically described as ensuring, if they were observed exactly, the foregoing of some pleasures wholly at special times and in particular circumstances; the checking and arresting of pleasure at due limits in cases where it is wise to enjoy it; and the undertaking certain activities against inclination, if the liking be not present, for the right fulfilment of the practical requirements of life. This is a broad statement of the case. In actual experience, occasions are perpetually arising which are so complicated, so mixed, so doubtful, and yet so critical, that no mechanical application of cut-and-dried rules is feasible. Out of that very impossibility, in fact, arises the higher economy of the emotional-experience. But, speaking in a general way, it has been pretty well discovered, by merely em-

pirical noticing of the results, what modes of Conduct give the highest possible multiplicity of results in ordinary life, if circumstances would only keep enough simplicity. The conclusions will be found ready set forth in ethical treatises and in the formal expositions of jurisprudence. But in the case of each person, we repeat, the successful performance of these set duties asks a particular, individual self-organisation; the process, though in effect identical in all instances, having to be modified in-and-by the history of one's own case. In this latter achievement the practical wisdom of life consists. A certain order of rightly-adapted reminiscence requires to be secured, attending on every actualisation of the Ego. At every juncture of the happenings of life we need suggestions of the true forecast of the event,—cues awakening the fullest social sympathies,—habitual stirrings of aspiration appropriately occurring. If only these could be got, then, for each opportunity we should have successions of light challenges of Attention, with correspondingly alternative-responses of feeling, versatiley exercising the Conscience, and enabling the Will to work at its freest. This is what is implied practically in the living a right life; that in which all the duties are performed, each act and occasion giving us the full possibility of consciousness. Clearly, no mere calculations beforehand of duty can be made sufficiently refined for these

ends. In the last resource we fall back on the Conscience, not the judgment.

This auspicious Conduct can, indeed, never be hoped to be fully got by man in this world, for the course of his life is too short: still everyone of us knows in himself, and, also, from the example of others, that more-or-less of progress can be made in securing it. There is a consecution of thought and feeling and volition which discloses this wonderful economy approximately. If this can be made by the working-sanctions of the Conscience to develop a self-adapting management sufficient for ordinary occasions, needing but to be heightened and improvidently-rectified at the occurrence of rare critical junctures by the alleged mystical acting of the Will, that will give what is practically signified by the Organisation of Experience. But let us inquire a little more closely what it implies.

§ 5. *A Due Chronology is needed in the Actualising-Nervous-Activities.*

The ordering of experience in the elaborate way just above described as being required to ensure rightness of Conduct, clearly depends upon the observance of a precise chronology in all the nervous-activities definitely actualising it. Plainly, this is a business much larger than our primary egoistic-consciousness; the affairs are events with which the

inner higher-structuralisation has most to do; for, if we must push the inquiry to the last stage, right Conduct asks a definite inter-arrangement of time-relations in the organic-activities of the conditioning-apparatus, giving certain coincidences and non-coincidences of specific ideas and feelings, recurring in effective order. These, in turn, as we saw much earlier, are constituted by minuter reminiscences; the number of such elements increasing according to the elaboration of the coincidences needed for the sentiency. How are these chronological happenings of nervous-activity guaranteed? There is but one way for securing them,—namely, the performance having already taken place ever-improvingly on previous occasions (or else the defects having been made up by a compensating-totalisation of the experience at some stage through a mystical act of Will) of all the duties subsidiary to the one then obligatory. Failing in this, the constitution of the consciousness then due in fulfilment of the occasion must be defective at some point or points. Some of the ideas, some of the feelings are missing from the grouping, and the mood is in so far ill-suited.

The reason for the high value of truthfulness as a feature of all Conduct now becomes very apparent. Technically considered, sincerity is, in fact, the prime virtue, which nothing else can substitute. For falsehood is always, in some degree, destructive of re-

miniscence, and that is the very staff of our life. Falsehood breaks up in part the natural consentaneity of some of the actualising co-ordinations; its own mere imaginings, unconsolidated, unramified by the efferent-activity, not being reliable for right recurrence, their cues not being sufficient either in number or in force. Truthfulness operates in just the contrary way; its frank openness gives full play to the necessary action of the Principle of Virtue, increasing consequences. The full, complete activity of Conduct which it characterises, necessarily at every stage of it provides habits and reminiscences which offer constituents for a co-ordination next highest above it in actualising-value.

This is the absolute statement of the matter formally. No man, we again say, can hope for such an Organisation of Experience as will promptly give the right reminiscence for every possible juncture: the best of the species only have this within the limits of certain variations of occasion, of certain degrees of intensity in the temptations which arise. In fact, we have to get along with a defective, makeshift Organisation; and to find out the method of securing even this is all that we can hope for. It may thus be roughly stated,—

§ 6. *Practical Use of certain large Rectifying-Generalisations.*

In practice we have to substitute the lacking

of this proper right chronology of the ideas and feelings due in the particular occasions by running, in a fitful way from time-to-time, as best we can, what may be termed the defective ordinary neurotic-diagrams,—those by which we live from mere moment-to-moment,—into larger, more generalised cerebral-figures, the trains of which are fully organised, and which, by the common convenience of their cues, are to some degree practically under control. There are such generalisations,—religious beliefs, maxims of social prudence, etc.,—so widely ramified in their inter-associations that they can often enforce the right practical Conduct when the finer, exactly appropriate detailed-habituations are missing. This they do at times in very roundabout ways. These larger cerebral-configurations kept existent in more-or-less degree of formative completeness in-and-between our overt acting, form, as we have shown elsewhere, a higher Conduct in themselves, which gets its effects in the lower overt-realm by the minute, temporary diagrams of the actual doing being overridden, and made to form parts of the larger, more sustained motivation, the habitual recurrences of which give our idiosyncrasy, our^f character.

A man—if there could be such an one—who had none at all of these generalisations, would act giddily from moment-to-moment on the mere spur of unsteadied impulse. But any generalisation has a

steadying power within its own range. A worldly man may check his impulses by calculations of prudence, by habitual recollections of the Law and of public opinion; one of somewhat higher development may do the same by a sensitiveness of honour; rising further still, an individual might do it from sympathetic motives of helping the public good. It is clearly a mistake, for instance, to assume that no degree of Organisation of Experience is possible without religion. All that could be urged on that score would be, that the religious generalisations are the highest in complexity and efficacy, virtually including the others, if they are themselves rightly framed; and that they are consequently the best resource in the stress of Temptation, and the only means at all adequate for some inevitable contingencies of our lot. Indeed, when treating of "The Ego," it was expressly urged that an illicit art of life, a false management of its chronology, partially and temporarily substituting the above mode of right Conduct, is possible, and is, in fact, practised by men of what are called worldly minds. These can, by adopting a method of varied activity, offering continuous occupation of Attention, pass the time lightly during some parts of life. The pleasures of society, its gaieties, its luxuries, become an apparatus for securing the presence of certain agreeable feelings with something like punctuality, so long as it is practicable

to increase the challenges given to the sensory nervous co-ordinations. That possibility fails in the end, even after the fatal aid of false Art and of dietic stimulants has been had recourse to, for by those dissipations reminiscence is used up; but for a time the false method is effective in that costly manner.

We have here got back, therefore, to the point we came upon earlier. The difference between the right and wrong Organisation of Experience is this,—that while the former, by falling in with the natural course of things disclosed in the scheme of this world, multiplies the occasions and motives for repetitions of activity in the future, giving an ever-increasing totality of consequences, and continually rendering finer cues sufficient for the prompting of consciousness, the latter diminishes the motives and lessens the occasions, making larger-and-ever-larger demands upon the nervous co-ordinations,—in the end impairing, it may be destroying, all possibility of experience by finally ruining the body as well as jading the mind. To put the distinction in a few words, Vice tries to gain its end by the short means of making a Chronology of Occasions stand for the right and proper one of Moods, which latter can only be progressively got by rectifications effectuated through the Will, but which, once achieved, is a style so superior that it makes that of Occasions of very secondary importance. Man in that way can become

so versatile, so competent in himself, that he can use opportunities nearly indifferently. In the absence of this right versatility, the only chance is that of temporarily holding on by the minor virtues of fortitude, patience, hope; but it is clear that these are only makeshifts, signifying the lack of something better. They are the high proper consciousness at different stages of making. This, however, is hurrying to the conclusion.

If we go back a little, it may be pointed out, that one thrifty result of our lacking in the exact full Organisation of Experience for the minor commonplace occasions of life, as above pointed out, is to practically force us to cultivate some of the higher generalisations by which the lower deficiencies have to be substituted. Without something in the shape of a Conscience, a man cannot get along at all. It is impossible for life to be cultivated on the utterly petty plan of attending to the present occasion only; some larger mental-habitudes must be mingled, and the scale of consciousness be ever-and-again made excessive for the moment, as if preparing for a wider future.

§ 7. The Questions of Utilitarianism, Egoism, and Altruism.

But something yet needs specifically adding on these related questions. At the beginning of the chapter, in trying to lay down a calculable Principle of Virtue, it was stated that the Conduct for which

Virtue is the name implies enlargement of egoistic-consciousness, and, also, that the activity necessarily set on foot in the effectuating of right doing provides naturally in the practical consequences of it future occasions of experience better than Vice does. It was pointed out that on the large scale of the community Civilisation clearly exemplifies this,—Utility being undoubtedly the standard of right for Society as a whole; no other rule, in fact, being at all practicable by or for the public. But we found at that early stage of the inquiry, that this rule could not be so simply applied in the case of the individual. In saying that in every instance of rightly-adjusted Conduct it could be seen that more possibilities of future experience would flow out of it than would do if the behaviour had been the opposite, it was necessary to add the qualifying phrase, “reckoning in a man’s fellows as well as himself.”

The difficulty in the way of making Utilitarianism the final test of ethics lies in the fact of an obvious incommensurateness between the cases of the community and the individual, owing to the haphazardness and abbreviated duration of the latter’s career. If, for example, an act of heroism performed for the public good involves loss of life on the part of its valiant doer, that virtuous activity obviously does not provide increased opportunities of experience in the future for that particular human being so far

as this present world is concerned. It, in fact, ends his opportunities in this state of existence. The religious hypothesis, it is true, meets the difficulty by a promise of a life hereafter, in which wise, nobly-meant self-sacrifice here is likely to be recognised in ways preventing it from being disastrous really. But the point of importance just now is, that owing to this palpable possibility of disparity between the public and the private good in any single case, a helping-out assumption of this kind has to be brought in, if Utility is to be made formally applicable throughout as the standard of Conduct. Of course, in the above illustration, in which it is supposed that the individual is sacrificed wholly so far as this life is concerned, the most extreme instance was put forward. But the same rule admits of countless minor applications. If you forego any opportunity of advantage or enjoyment on public grounds, so little are you certain of continuance of ability, position, or life, that you do it at a risk of its never being actually compensated to you in a directly-traceable way on a future occasion.

It must be kept in view that it is the single case of a particular individual that we are considering. Every thoughtful person knows that self-subordination is the very basis of Society, and that we in that way gain far more than we lose. All are aware of a tacit understanding that every member

of the community is to make some sacrifices on the public account; they will, moreover, it may be taken for granted, each admit, that, if all the rest in Society, or even a great number of them, took selfishness formally as their guide, every one would suffer from it. Society would, in fact, be necessarily dissolved. But in no individual case is that the necessary alternative,—in respect, that is, of a man and the large community. Every one may occasionally take great advantages of Society, and many do so. The community is, indeed, compelled to enforce its general requirements by a practical method of compulsion, relying only to a very low degree on spontaneous conformity to the public interest. In continually-recurring cases the possibility presents itself to the individual of avoiding prescribed social obligations to his own immediate worldly profit; and this, too, happens often in ways so exceptional, that not only may the person argue that the good to himself will far out-weigh any harm to Society, but it may appear that he can so manage it that there will be no direct harm to the community at all. The principle of Utility in such a case apparently supports the individual in seeking his private end, and only logically saves itself on the side of the public good by some vague general principle, which the individual may still see a feasibility of disregarding in his own case in that special

instance. 'In a word, owing to this radical incommensurateness between the private and the public case, it is impossible for Utility resting on a calculation of future consequences to be fully applied as the rule of private ethics without some subsidiary assumptions, either religious or of some other kind. Utility is the only principle on which any public legislation and administration of police can proceed, for such legislation and administration deals with the community, which has a continuous existence in this world, and on behalf of which you can reckon on the future occasions provided for by right Conduct certainly arising. But as far as concerns the individual, we have to cast about for some other working-rule.

It has very naturally occurred to some modern thinkers, who have found themselves unable to retain the old dogmatic beliefs, that if the sense of social obligation is to be preserved or to be made privately effective for the required purposes of Utility without the aid of those religious hopes of future occasions, it can only be done by the feelings existent at the moment of activity getting a practical enforcing-sanction from apprehending the remote general consequences of Utilitarian Conduct; that is, from imagining the results of our self-sacrifice in so acting in the case of others, *i.e.*, of society, the race, the world, since the consequences cannot be reckoned on—nor indeed ever be hoped to be fully had—in our own instances.

We are ever gratefully to remember how much we have inherited from the earlier generations, and to imagine the benefiting which will hereafter descend upon our successors from our efforts. It seems at first sight that the only Emotion to be got in this way could not rise higher than an ecstacy of melancholy; but looked at under the merely executive-aspect of Conduct which we are now considering, it does not greatly signify what the feeling is if there be instigation sufficient to prompt the self-sacrificing mode of activity. The assumption necessarily is made in the teaching of which we speak that there is multiplication of consequences in the best human behaviour, and the hope founded upon it is the establishment of a Conscience emotionally enforcing the intellectually-apprehended principle of Utility. The raising of this issue is one of the most valuable services rendered by modern philosophical thinking. In an earlier place it was briefly mentioned that Comte in France, and Mr. Spencer in our own country, have brought into clear prominence the great fact that man finds Society generating in him additional feelings, which may be of most valuable kinds. Society does this by means of collective-sympathies naturally starting and working themselves out elaborately in ways more or less spectacular. There was, of course, always some apprehension of this fact. The sentiments of patriotism, loyalty, etc., are ancient

enough; but the increasing scale and complexity of modern Society clearly is developing some new common passions, part of which only are covered by the general name of philanthropy. The modern democratising of the State has necessarily modified the feeling of personal loyalty, but it seems promised that fresh recognitions of obligations of public duty, and new perceptions of benefits got from their discharge, with a generally resulting grander idea of the State, may afresh ennable even politics in a quite different modern way. A novel social enthusiasm is undoubtedly possible; the question is, how high can it rise? and it is not easy to predict the tide-mark beforehand. Two or three general remarks as to the possibilities of higher organisations of experience than those now prevailing will be found in a later section.

It will have suggested itself to the reader that this is really a large handling of the questions of Egoism and Altruism. Condensing that controversy greatly, it may, according to the preceding views, be said that whenever the neurotic-diagram instigating activity in Conduct includes the cues got from a sympathetic sharing of the lot of others, it may be distinctively styled altruistic, even if it should still be formally argued that there can be nothing but egoism at different degrees and stages of sublimation and widening. Those who wish for a full discussion of

details cannot do better than turn to the pages of Mr. Sidgwick's valuable work, "Methods in Ethics."

In the merely compendious dealing with these multiform and intricate questions which is alone practicable here, what we have to hasten finally to add is, that in the failure of the possibility of a full applicability of Utility as a rule for the private life, —Conduct in the case of the individual being left in great part a matter for the Conscience as well as the judgment,—any egoistic-faculty man has is fully challenged. He finds the occasions of life too complex, too subtle, for pre-arranged formulæ; he is confronted perpetually by critical affairs, competitive duties, mixed obligations, as to which he must decide right out of his character fundamentally as he best can. He cannot even govern his doings by any lofty and simple rule of always acting for the public good. Not only must his family have precedence of the community in some things, and his neighbours, his creditors, his servants, etc., make claims which are to be recognised as superior to those of strangers, but he is bound to exercise his best wisdom even in sacrificing himself to any; for he must not only be of use to others, but of the best possible use to them and to all, or he has sinned altruistically. A man, unless the occasion be critical, one wholly out of the common, must guard his health, attend to his common business,

support his family, pay his way, be kind generally, and prudent to the full limits of his foresight.

§ 8. *The Art of Conduct.*

Putting all these reflections together, we find that the only prudential calculating which the Organisation of Experience permits, is the liberal one of common-sense; that which does not aim at providing single pleasant occasions one-by-one, but at circumstantially-constructing in a general way a man's natural position. He must safeguard his hearth, and must take upon himself all the ordinary relationships of life, private and public, family, friends, work, and the duties of citizenship; so giving himself a sufficiency of human business to fulfil activity and alternate Attention.

And here it has to be pointed out that another great circumstantial or institutional Organisation of our life is imposed upon us, apart from our will, namely, that of the customs, arrangements, laws, and general state of society in the community of which we find ourselves a member. In its detailed qualification of our lot, this enforcement of experience touches us more frequently, if less largely, than the sense of the general human fortune in which we share with all around us. This is not a place for attempting to treat in detail the vast subject of Sociology. For our present purpose we need only put it so broadly as to say that the individual has a right

to primary education in the early stage of life, to which he will do well to add some personal accomplishments; and that, as above urged, he should sufficiently avail himself of the opportunities which the institutionally-imposed Social Organisation gives him, or leaves him, to secure that his life is reasonably busy with domestic and civic interests.

But the Art of Conduct offers scope for more particularity of skill than this general arrangement of his position. Each man should find out, in the way of intellectual-estimate, the limits of his powers of resisting specially-recurring temptations, trying to manage the occasions of his life accordingly. For a certain management of occasions, seeking some and avoiding others, is within the ordinary daily egoistic-transactions; and, when effected successfully, it qualifies the risky demands made upon the higher Organisation of Experience. In what relates to that final department of self-management by means of spiritual beliefs and mystical aspiration, the limits necessarily imposed by the position taken up in this work in reference to Dogma preclude very particular statements. Anything which it is practicable to offer on such topics can be said better in a later separate section. But, speaking at a lower level, there still remains to be added to what has been said some exposition of the right use of Art; which, as we will try better to

explain in a later chapter, is absolutely needed to fill up and complete experience, having for its great subsidiary purpose, the widening of the neurotic-diagrams by fine ideal rehearsals; thus fragmentarily preparing larger habituations of consciousness in the practical Conduct even. In the recognition of this necessity and of this high advantage of Art, a great part of Civilisation must always consist. Indeed, the ancient civilisations, which consisted of little else than æsthetics, in more than one instance perished from Art-corrupting by running into excess of artificiality.

Again, it has to be repeated, that the general working of things provides for the defeating of the full success of even this wider prudence, but it is permitted to prosper to varying extents, the bounds of which in each case the individual can alone find out for himself. To discover them is a real gain to him and to all concerned, for it adds to his efficacy as a working agent in the scheme of affairs.

§ 9. Possibilities of Higher Organisations of Experience.

But, as was earlier hinted, something further and higher, even in the way of merely general remark, can be said on this subject. How little human experience is yet organised in the bulk of men,—what wonders of improved consciousness are in that way clearly possible! Not only have we the magnificent examples of the exceptional persons born with

what may be called a genius for Conduct, but hints of the enrichment which increased complexity would give are offered in the humblest career whenever personal and social relations are a little multiplied, a little closer drawn. In youthful falling in love, in the parental and filial feelings while these are kept fresh, faintly in some friendships, these glories shine forth intermittently upon us. What is their secret? It is always the same, and is very simple. The young pair of lovers are to be a little nearer-and-dearer to each other than unmatched people, to live together always in mutual help. That is all. Yet this mere massing of far intentions can turn into the brightest vista the dull prospect of interminable common days. Parents and children have done and are to do more for each other than can do those who are not so closely-knit. This is enough. It is the same in the case of friends; the fortunes of each are to be shared by the other, and so are doubled for all ends of emotion. Not infrequently, when the feeling has obscured, or failed, the magic will later work again: it will, in truth, revive afresh whenever the Imagination favourably acts between two persons. The process of the wonder is easily stated. In all these instances, the neurotic-diagram is on a scale of duplication,—there is the complexity got from the reactions of a second individual.

Whenever and wherever men apply this rule of mul-

tiplying the consequences of themselves favourably to one another, it tells as instantly, as perfectly, as a physical law. A few have at intervals walked in the world who have, each in his own original way, found out this marvel; they have through some private merit of deserved happiness, stumbled upon this pearl of great price. It has proved sufficient for them even to wish enough to help their race; instantly these secret delights have risen in their hearts. Straightway man in general has become to them so sweet a thing that the infatuation has seemed to the rest of their fellows to be a celestial madness. Beggars' rags to their unhesitating lips grew fit for kissing because humanity had touched the garb; there were no longer any menial acts, but only welcome services. It was the humblest, the easiest, the readiest of duties to lay down life for the ignorant, the ill-behaved, the unkind,—for any and all who did but wear the familiar human shape. That this ecstacy of humanity should rise so much higher than any other is according to the plain working of the law of accumulation of finer consciousness by complexity in the occasioning-activity. Remember by how much man is the subtlest circumstance in the world; at how many points he can attach relationships; how manifold and perennial he is in his results. All other things are dull, meagre, tame beside him. If the most part of us are only

as dross to one another, in place of being of this priceless value, it can only be from the lack of mutual services among us. Without these how can we but want sufficient adaptiveness of mood,—how can we help groaning under the weight of instincts half-organised or wholly unfulfilled?

In mentioning this need for doing something for one another, we again touch upon the central mystery. When inquiring into “Conduct,” we saw, as has been re-mentioned once before, that the first immediate gain of Virtue consists in the enlargement of the true egoistic-diagram, the limits of which are defined by the efferent-activity. All that we have said about complexity in the conditioning of our experience enriching consciousness may be translated into the technical terms of that earlier statement. Unfortunately, that terminology is not familiar enough to be effective; but of the facts themselves there can be no doubt. The charm of philanthropy, and all its uncalculated bounties to its followers, lie in the easy spaciousness of Self which it renders. Even rough, hard politics can, when statesmanship rises high, mimic something of this graciousness merely from being practical; while in common social intercourse, politeness, in spite of all the deceptions of its hypocrisies, always attracts us by the bare possibility of its indicating the true spirit.

§ 10. What would seem to be required for the Final Organisation of Experience.

If we now finally restate the matter, the theoretical conclusion may be put thus:—

The experience should be so organised as that the total series of our ideas, feelings, and volitions should be adequate to give for every occasion consciousness so alternative and cumulative as to keep us tranquil in all the haps of life, by ascending reintegrations of our sentiency at higher-and-higher stages of belief and hope, whenever events disturbed a lower integration. What in an earlier section is termed the due chronology of the conditioning nervous-activities, would alone be made perfectly possible by a hierarchy of related cerebrations of this sort. The old dogmatic beliefs attempted to give such an apparatus; there being got by their prompting and aid an intellectual-activity purporting to be complete and adequate in respect of the whole human situation. Modern Science has, in the eyes of very many, discredited those beliefs; and a philosophy has arisen which goes to the extent of forbidding endeavours either to correct any of these dogmata or to substitute them by that mode.

The avowed aim of the Positivist Philosophy, practically stated, is a certain restriction of the egoistic-actualisation by confining man's regard to phenomena, and turning wholly away from Meta-

physics. The strength of its controversial position lies in the facts of history proving that the old system of dogmatics did really during a long period divert attention from the acquiring of actual knowledge of this world, and that those authoritatively representing that system forbade and hindered such search; while it has been shown, by long and successful resistance to the ill-used authority, that acquaintance with physics is the only way of mitigating the material evils of the present life, such acquaintance affording, as experience demonstrates, possibilities of doing so to a very large extent. But having said this, it has to be added that in the very nature of the case this Philosophy can only offer such a final Organisation of Experience as we are now discussing by stifling curiosity, by limiting expectation, and by habituating the human mind to smaller hopes in the individual case. After having made its utmost claim it necessarily admits that the practical Science towards which it points all endeavour cannot command the chief events of man's fortune,—the happening of the individual's allotment of physiological apparatus and of position at birth, and the arrival of death, which events give the old moral problems; indeed, it rather ostentatiously pleads its helplessness in these ways, proffering just two emotions to mitigate the oppressiveness of finding the universe insoluble,—a pathetic

self-commiseration in every distress, and a sense of our being of use prospectively to posterity.

Anyone can see that this is a much narrower egoistic-actualisation than that which purported to be got by the hypothetical additions of the religious beliefs. If experience is to be completely organised, so that there shall be ascendingly a higher grouping of ideas and their related feelings, capable of reintegrating our sentiency at every disturbance of it by events, it is clear, considering some special events which are included in the human lot, that premonitions of Faith as to a future existence, etc., are indispensable; as, for example, to reintegrate consciousness in the case of bereavement of the loved. The absence of those beliefs, in fact, gives a palpable deficiency in the theoretical list of reintegrations. But the question is, whether we are at liberty, or whether at the present day, with the scientific knowledge we have, it is practicable, to imagine hypothetical completions for this final Organisation of Experience? The objectors to Dogma affirm that that was done in ways more-or-less natural, and indeed inevitable, in the past, but that it was all mistake, with a further added self-interested abuse of the illusions on the part of the sacerdotal and political classes.

Is there any ground on which this controversy can be brought to an issue which will make its decision a case of the methods the Positivist is already using in

his other conclusions, since only such a possibility can commend itself to him? We have already pointed out that the controversial strength of his position is that the dogmatic beliefs had during a historical period the practical effect of lessening helpful social-activity in this life. According to the Principle of Virtue set forth at the beginning of this chapter, that effect, if it were proved to arise essentially and not accidentally, would be conclusive against a belief occasioning it. There would in so far be presumptive evidence that it did not bring into play any actual prospectively-pointing causation,—that it was not an effective and valid enlargement of the egoistic-actualisation. But if this reasoning tells one way, it also has an application the other way. In Chap. XV., § 3, when treating of “Faith,” an attempt was made to frame from it a working-rule. At this moment the anti-dogmatist appropriates, and necessarily so, all the modern increase of social-activity got from the rise and progress of Physical Science; but has it ever been, even in any rough way, made out how much of the culpable opposition to Science on the part of the dogmatists sitting in those earlier days in the seats of authority was political, and how much of the discomfort at it of a less culpable kind among private religious men was temporarily unavoidable merely owing to its disturbing mental-habitudes?

To put the point in another way,—Is it shown that human Attention is not wide enough in range to pursue scientific research and to hold in belief a religious hypothesis at the same time without the latter hindering the former? There certainly have been and still are cases of individuals seeming to combine acceptance of Dogma and the pursuit of Science. On the other hand, there is the undoubted fact that many of our leading men of Science are sceptical as to all the old religious tenets. If it could be clearly inferred, as was hypothesised in an earlier place, that in their cases there is alongside any excellence of mental activity in respect of their special faculty, simpler cerebration as to the high generalisations of the final aspects of the human lot, their scepticism would become an intelligible mental phenomenon, and would, indeed, be seen to be itself an illustration of the fundamental principle we are here considering. The future will throw light upon this point by the mere accumulation of cases.

If it should be proved that religious belief does not necessarily interfere with the kinds of activity needed for Science and which are prompted by it, then the same principle that is now fallen back upon for the glorification of Science,—namely, its proved multiplication of operative-effect,—would be available for the validation of dogmatic hypotheses. If it can be made out that any of them enable men

better to bear the burdens of life, and to be more helpful to themselves and to one another, showing, over periods wide enough to take in all likely reactions, increase of social-activities, that is evidence of actual causation working in them. To cast these hypotheses out of the final Organisation of Experience would, in such case, be an unnecessary restriction of the egoistic-actualisation,—the highest human folly that could be committed.

The detailed examination of dogmata with a view to testing the articles respectively by the above rule is, we repeat, quite beyond the scope of our present task, though to attempt a statement of the principle itself was a necessary part of it. Its particular application, it is easy to see beforehand, would condemn much religious thinking which has from time-to-time had vogue. Also it must be added, that the criticism so eloquently put forward by the chief Positivist thinkers condemning the low state of feeling and the poor degree of helpfulness shown in the present social organisation, or rather social disorganisation, triumphantly establishes itself. However, this large topic is not within our scope: we have to return to the prescribed limits of the inquiry.

Practically any such perfection of a final Organisation of Experience as would answer to the above theoretical completeness is, we again say, hopeless

in this world; the plan of things seeming to hint at a more casual, but, in the end, a larger economy than even that would be. Every man, at some point of his career, finds events too much for him; he will make mistakes, he will be carried away by the suddenness of temptation, by the overwhelming challenges of occasion. At times his Will stirs too late, and he does things against his wish. How in these ways arise the opportunities for pity, for forgiveness, for admiration, for love, we have already seen. This makes necessary, as a last stroke in the Organisation of Experience, the framing a method of retrieval in cases of deterioration, if such a method be possible.

§ II. *The Resources for Retrieving the Lost Right Chronology of Sentiency.*

The final question, then, is this practical one of vast importance,—How can the right chronology of Mood, when lost, as is continually happening even with the best of men, be regained, and be improovingly-rectified so as to give economical heightenings of sentiency? Those who are without the religious beliefs affording a persuasion of the possibility of assistance from a Power capable of multiplying energy, have the single resource, if the cues for it arise, of contemplating in a way of intellectual tracking-out the consequences of ill Conduct as affecting not only

themselves but others, relying upon the Imagination giving them correcting-emotions. Clearly a habit of mind can thus be framed having a real disciplinary effect. The dogmatists, however, claim to have a more detailed method. They use meditation and prayer preventively by rehearsing occasions of Conduct, and when behaviour has gone wrong, they allege that they can proceed further than mere stolid regret for ill results. By penitence, by aspiration, by faith,—actualised efferently by attempts at reparation and amends, where that may be,—they say it is possible to put the inner-structuralisation, the Soul, through the round of the possible recurrences of its activities, till, after more-or-less of time, they find themselves again in a right sequence, which they affirm is thus improved supernaturally by grace; a special emotional-reminiscence of higher worth being added, actually turning ill into good, though, according to their statement, this is impracticable without penitence. Then, if on the next occasion of like temptation they again successfully resist, they further improve the best experience by adding afresh to its cues. It is obvious, that resistance to temptation, however it be effectuated, in part throws out of gear a lower nervous co-ordination, and owing to beginnings of repair in the act of present exercise determining future use, a tendency is set up to a different and a higher

time-relation in reminiscence. There also comes into play a further law of gain, which has been already hinted at earlier, but which will be better finally explained in the chapter on Evil.

Something, however, ought in this part of these investigations to be separately said on the subject of Prayer. That practice fills too large a space in the history of human experience not to ask special consideration; for though the modern discrediting of it by scientific teachers must certainly lead to a narrowing of the old limits of hopeful recourse to Prayer, an inquirer into these matters is not absolved from trying to ascertain whether a more moderate, reasonable use of it does not remain. But the examination will necessarily run into detail,—doing so in a way out of proportion somewhat to the scale which has been tried to be kept in the body of this work. It will be better to put what suggests itself upon the topic into an Appendix. (See Appendix B.)

§ 12. *A Historically-Arisen Deficiency in Practical Organisation.*

One other remark, however, may be added before closing this chapter, pointing out a specific disadvantage under which men now lie with respect to the Organisation of their Experience. It is an important historical characteristic of our present common ethics that man is now practically made

nearly fully responsible for the whole of his consciousness. In ancient times, no small portion of the activities of the human-apparatus, or rather of the results so conditioned, was attributed to supernatural influence. Nothing is now allowed either to ecstasy or to ill inspiration. Until recently, the popular Christianity offered a belief which in part answered the same practical end as the more ancient notion of ecstasy,—in bad cases of Conduct the influence of the Devil might be brought in as more-or-less of an acting cause. Something was said earlier of the historical transformation of dogma which is taking place before our eyes in respect of that belief. But what we are urging now is that the circumstance of this view having become largely obsolete has had the effect of undoubtedly making much more onerous the self-management of a man's consciousness, and has also rendered our mutual relationships harder and harsher, wherever a practical adoption of Necessitarianism has not obtained. And these latter cases are really very few, and are always imperfect. If one individual injures or offends another, the one who is aggrieved usually holds the other accountable for the damage or the unpleasantness entirely, without any abatement. It is, apart from a little qualification sometimes fortunately made allowing for "temper," all credited to the other's Ego or self. The evil is in no way re-

dressed by the fact that the accuser may judge himself just as bitterly in respect of some of the thoughts and feelings which arise in his own mind, holding himself answerable for the whole of the ill-promptings which are recognised by him as being wrong ones.

The subject is one requiring very exact handling, if meddling with it at all is not to do injury. But it may at least be said, that though the earlier notions we have spoken of as limiting man's sense of responsibility for his own consciousness and as softening his criticism of the doings of others when their Conduct was unfavourable, are now antiquated, there sadly needs some conception practically substituting them, which would have the same working-effect. It is plain, moreover, whence it will have to be got, namely, from a detailed familiarised knowledge of the processes of the Nervous System, with its hereditary and automatic activities. Already some rough beginnings of the introduction of this mitigating conception have been attempted by medical men, in reference to the administration of our criminal jurisprudence, and as to some types of disease. But a much finer application of it is needed in ordinary social intercourse, in domestic life, and in the individual private consciousness, before the self-management of our experience will get the possibilities of rectification it greatly needs.

An apprehension of the true limits of Conscience, as marked by the boundary of the egoistic-diagram proper, distinguishing between that and the non-egoistic neurotic-diagram, would at once rightly ease and efficiently stimulate our self-discipline. Indeed, as was earlier pointed out, the functional use of the old dogmatic belief would in that way be regained.

But an inquiry into the dark question of Evil is needed to get any further hints of intelligibility as to these subtle matters. Another chapter, however, requires interposing before that part of the task can be attempted with advantage. We need first to recall the general aspect under which modern Science forces us now to regard the world, looked at as an executive-scheme.

CHAPTER XVII.

SCIENCE : ITS CHIEF MODERN GENERALISATIONS.

§ 1. The Growth of Science necessarily makes Investigation Departmental.

IN the possibilities of Science, *i.e.*, in the accumulation of our knowledge of Nature, or, in other words, of the Executive System of the Cosmos, and in the consequently enlarged powers of our manipulation of Matter, with all the practical wonders so elicited, one ever pointing the way to another, lies the improvement of man's earthly fortune. What further marvels this scientific progress will give in new contrivances for lightening his toil by substituting mechanical labour, in increased rapidity of locomotion and facility of communication, in the prevention or cure of disease, in the avoiding and softening of pain, the multiplication of pleasurable sensations, etc., no one can definitely foresee. But what has happened during the last two generations is enough almost to intoxicate men with hope of a better future for the race in all these respects.

One result, however, of the ceaseless advance of

Science is to make its cultivation necessarily departmental; the realm of knowledge expands on every side illimitably, its circle having already stretched far beyond the individual student's range. The single mitigation arising out of this inevitable disappointment lies in the fact that the obligatory division of attainment will multiply the social feelings. Eminence in one branch cannot be jealous of distinction in another; experts may mutually astonish one another by their superiority. But to make this unending accumulation of details manageable, and to give a common ground of popular-intelligibility in scientific matters, some wide fundamental generalisations are needed, in number sufficient, at least, to supply a scheme of formulæ for a primary classification of the physical events. The following may, perhaps, be of some use in this way:—

§ 2. *Some Primary Generalisations.*

I. Whatever imperial egoistic-faculty, either in a way of survival or of premonition, the experience of Will in man may be held to bear witness to by its magnificent illusion of immediate executive-power; Science in our present intellectual mode has nothing to do with creation. Go back in our thinking as far as we may, we have to begin with an egoistic-affirmation, which assumes the existence of Energy, taking it for granted not only as already in

being, but as operating in a manner of individuated-activity,—the very individualising in its own natural exposition in our observing implying multiplicity and mutually-referring relation. In other words, Existence, at our first scientific-apprehension of it, is for us already differentiated, numerically at least. Whether we name these ultimate potentialities of phenomena atoms, centres of force, or whatever else, and whether we deal with them in molar or molecular quantities, it will be found that relative position among the individuations in some way already effected is for man the original cosmical event,—Time and Space being implicated in it as its essential conditions. Time and Space will again have to be spoken of later, in dealing with the topics of Metaphysics, but Motion is for us practically the primary process of causation in all the realm of Science,—the word Motion, as before explained, being our name for the sensory-intellectual apprehension of the mode in which the individuations of Force affect one another in this necessary mutuality; the activity of Energy naturally giving change of executive-operation, even if it be only in respect of the first apprehended fact, that of position.

II. But the widening apprehension of the executive-operation instantly discloses to us another step. The first practical conclusion suggested by observation,—being, in fact, that which gives the fundamental basis

for all later Science,—is this, that Position consequentially affects Motion; the two, by a law of inter-relation, mutually tell on each other, bringing in an element of calculable-variability; for in correspondence to alteration of position there is found to arise proportionate difference of that which we call rapidity. Further, these reckonable positionalised-individuations of Motion, according to their occurrence among one another, can and do by means of that law systematise themselves with degrees of complexity in inter-related groupings, be they molar or molecular; some of the groupings, owing to the above-named differences, being in their executive-operations necessarily antipathetic to other groupings, so causing further modifications of rate, direction, size,—each of these again becoming in the same ways causative within its range. Chemistry, which repeats on a miniature scale, but with more complexity, the disclosures of general physics, shows us that a molecule is a tiny system of these grouped individuations of Energy, and every such systematisation, whether it be a molecule or a stellar universe, has a distinct behaviour so long as its inter-association is continued, the events of that behaviour being termed its properties,—these continuing until the collocation is modified either by the larger inter-operations to which we give the name Nature, or else by man's minuter interference, called for the sake of distinction Artificial, though

the manipulation necessarily has to follow Nature's processes.

In this manner, out of the circumstances of individuation or numerical division of Energy showing what we style position, and position again implying answering-diversification of the rate of motion, the occurrence of the groupings further varying that which in practice we call the direction of movement, and these causes combined altering the collocations giving qualities,—which, in their turn, further become causes by developing reactions,—the world's executive-procedure, as it affects us, is disclosed; its happenings ranging, hierarchically, from the simpler events of gravitation, up through those of polarity, to the complicated ones of chemical affinity, etc.

III. According to the progress made in perfecting the mathematical analysis, which we have earlier seen bases on man's being able to use his own efferent-activity as representing the cosmical-causation, we are able to reckon backward and to calculate forward the series of relationships of position; causation being historically recorded owing to a quantitative law which is shown in all material phenomena, witnessing to Force (always reserving the hypothesised mystical-faculty of the Will) being a fixed sum, viz., in proportion as Energy displays a new executive-mode some of its operation ceases in a mode formerly shown by it,—the transforming being effected in

pursuance of collocation in things happening according to the above rules; this giving us a practical power of repeating the causation by our volitional-activity when we have discovered the laws of the collocation.

IV. At certain fixed points of the series of these inter-relations, the Energy so far changes its operative-mode as to become, at each such point, describable as a distinctive elemental-force,—heat, electricity, chemical affinity, etc.;—there being a chain of these specific kinds of executive-mode, observing a known order of sequence of transformation under due conditions, which must be learned from experience. Within the range of the laws of these correlations of force, immense enhancements of executive-result for particular ends are possible by happy adjustments of the causative-groupings above spoken of; the full degree of which possible gain, also, can only be discovered by experiment. The inventions and discoveries in these ways made by inquirers are the golden gifts of Science for the gradual bettering of the human fortune.

V. Next, we come to the higher activities of causation, those giving the complex results which we attempt to name by a term standing at once for the method and the effect worked by it, namely, Organisation, in so far as the phenomena are physical and therefore open to the Intellect. Consciousness, we

have elsewhere seen, is an added phenomenon, occurring whenever certain vital and sensory processes of a specifically-organised frame are rightly performed,—these, so far as can be made out, having of necessity to include activity in the machinery of a nervous system; this consciousness—though we can only conceive it occurring in derivative-beings with some limiting conditions of that kind, such, for instance, as an external executive-event or object being needed to give the occasion for Impression, or for something which that word is meant to name, and a recording repetitive-apparatus being required for reminiscence—is, we repeat, not itself a transformed, an occupying, or in any way an interfering use of the bodily energy. Its limitations have to be learnt from working-rules disclosing in the very modes of the added phenomena; the organisation practically conditioning the consciousness, as well as determining its own inter-related executive-operation; but only doing the former by virtue of a Law of Effectiveness to that purport coming into play, and as to the sanction of which we have yet to inquire.

That ultimate question, viz., whether these added phenomena of Consciousness can be regarded as special effects presenting themselves in certain executive-conjunctions, really conditioned and determined by those conjunctions, or if they suggest

a causation then coming into play different from the physical system, is dealt with in the chapter next but one after this. But pending the decision of that last issue of all, is it practicable here, with the help of the above statements, to frame a general formula summing up at its widest our Intellectual Apprehension of the Executive-process of the World? It may, perhaps, be attempted thus:—

A phenomenon, including here under that term what can be inferred as well as observed, is a naturally-occurring event in the system of the Cosmos, having to be regarded as a part of the necessary operation of that system, being specifically the function (to borrow a term from Mr. Lewes) of the executive-process in the particular developement then arrived at conditioning it; the causative-arrangements for operating the effect taking the name Organisation, in lower and higher grades,—the subsidiary media and the environment (to borrow a further term from Mr. Spencer) being reckoned into the conditioning ; the organisation, etc., in such functionalising exemplifying the progress of the Cosmos's own transforming-process, cessation being shown of some prior phenomena in quantity equal to the new phenomena, which, in turn, carry forward just the same quantitative efficacy.

Now let us go back a stage.

§ 3. The Mode of Organisation.

Looking, then, only to the physical phenomena of Organisation, it is possible in a general way to state the latter's method. It effectuates itself by what in our sensory-intellectual terminology is describable as chronological coincidence and non-coincidence of specific-activities in the inter-quantifications of the Cosmical Energy; their systematisation in that executive-relation giving structure, that is, statics and determinate related dynamical-operation, the one conditioning the other,—some of the activities which exist contemporaneously affecting each other antipathetically; and the cessation, temporarily or finally, of any of the systematised-activities which have been so relatedly grouped, having a causative value virtually throughout a smaller or greater part of the whole scheme, by reason of their absence executively affecting the others. Such cessation, retardation, etc., is decided by the Law of Causality, according to which every executive-operation, as being a functional-interquantification of the Cosmos, in developing an effect,—that is, in undergoing alteration of its own mode,—abates in precise quantity some prior mode; from which it follows that the chronology of every organism is in a way of dependence inter-related with a larger chronological-arrangement of the Executive System,—only getting its own repetitions of activity continuously supported by the

general operation of the Cosmos within the practical range, sphere, habitat of the organism, such operation, naturally or artificially aided, providing successions of subsidiary-conditions, or media, which are summarily describable as nutriment, opportunities of exercise, heat, etc.

The complexity of this chronological coincidence and non-coincidence in specifically-grouped executive-activity and of the inter-relation of such grouping with a larger chronology of the inter-quantifications of the Cosmical Executive System, ranges from the lowest systematisation, or structure, to the highest; but in the most elaborate instances, no matter how prolonged and successively diversifying their natural term, the developement of the whole series—as shown in growth, in the establishment of habits, in recurrent sensory-differentiations, in changes at successive stages of the lifetime, and in the ending by death—is prescribed in advance by-and-in the first chronological period, that of the constitution of the germ; subject to minor modifications being worked by the supply of the series of contributory-conditions in the media of subsistence,—heat, nourishment, opportunities for full activity, etc.; there being a capability, within marginal limits, of real variability occurring, owing to excess or defect, or difference in some other way, presenting in these contributory-media as they arrive,

the larger external working of things determinately supplying them. Further, the consequences of such difference tell on the final germ-constituting process, be they improving or deteriorating, and, owing to accumulating by a law of their own chronology, they in turn become causatory, *i.e.*, propagatory of improvement or else destructive. In the latter case, all the phenomena of disease are made possible,—in the former case, advantageous new qualities and properties may develop themselves.

The status of an organisation, it will at once be seen, is fixed by the degree it shows of complexity in these chronological coincidences and non-coincidences, and the cosmical inter-relations they imply, reckoned successively as well as simultaneously. For instance,—

A mere agglomeration of homogeneous substance, having only the characteristic of form got from primary cohesion, is a rudimentary arrangement of one chronological term only. In crystals, there is retrospectively shown more-or-less of elaborateness in a single happening of related coincidence-and-non-coincidence implied in the disposition of parts making the specific figure, but the activities do not include repetitions of themselves. The positions are fixed once for all in the moment of first occurring. In the case of plants and animals another word,—one having a most perplexed history behind it,—has to

be brought in,—Vitality. With a heightening of significance according to the respective grades of life, this term stands for the multiplication of the chronological coincidences with such inter-arrangements of them as provide for repetitions and variations under the prompting and enabling operations of the contributory-media; being adaptively variable within limits so as to undergo and develope fresh coincidences and non-coincidences; the retardation or cessation of some activities and the acceleration or conversion of others going on simultaneously,—these doings, in fact, exemplifying and furnishing the higher chronology of differentiation. Practically it will be found that the grade of an organisation in this lower physical aspect of it, is fixed by the power it has of widening the range of its habitat and of multiplying resources—in other words, of adaptively varying them—for securing and providing the means of its own subsistence.

In the superior creatures, some of the above-named chronological processes repeat themselves at periods of a second, others at intervals of minutes, hours, days, weeks,—some require years; and, by the accumulation of consequences in the collective-changes, certain decisive events are given, as we earlier said, which occur only once,—viz., age, death.

The old question of whether the word Vitality stands for an added causation will be best dealt with

incidentally as we go along. It will be noted that we are here only regarding Organisation as so much developement of executive-procedure,—that is, of specific occurrence of Motion. Scientific research has made out that for the starting of the most complicated as well as the simplest systems giving related chronological coincidence and non-coincidence of activity, the presence of the arrangement of Matter known as protoplasm is needed. The facts that we are ignorant as to the original forming of this special kind of Matter, that our tracking of differentiation in the germ of an organism is at present arrested at that point, and that we cannot calculate the working in-and-on Organisation of modifications in the contributory-media with anything like enough subtlety, do not, after all, block the general reasoning on this subject. The Motion which elaborates Organisation, giving structure and related dynamical-operation, belongs to the total-sum of Force constituting the physical scheme, and all the latter's events can but be interquantifications. We attribute "life" to any systematisation of these which shows in its process a power of appropriating from stage-to-stage, for the supplying of the successively-arising wants of its own economy, other interquantifications; converting their operative-potentialities into subsidiary parts of its own chronological-activity, its scheme thus being conserved and developed.

§ 4. The Procreative Process.

Procreation, which can only take place in organisms showing some repetition of chronological terms, implies that such organisms when mature have a provision for repeating within them the process of the first moment of the series; in that way producing the germ-arrangement of matter, which, granting the supply of right simultaneous and successive conditions of media of nourishment, growth, etc., will develop prospective determinations fulfilling the type. But in the bulk of cases, and invariably among the higher creatures, the completion of such germ requires sexual-concurrence,—this arrangement as it is exemplified in the more elaborately-organised creatures being one of the most striking illustrations of economy, socialising the process of their life and giving large multiplication of consequences in respect of sentiency.

Under this view, it obviously is in no way necessary that a germ should have the character of a miniature. In the case of beings showing recurring seasonal-differentiation, and any great distinctions at separated times of life, that would be but very imperfectly practicable. A germ only requires such an arrangement of substance as will give the initial activities carrying on the series of causative-developements far enough to ensure, on the supporting

media being rightly presented subsequently, its own specific typical-chronology of activities in the future.

Moreover, as is conveyed above, any alteration of these time-relations of activity beyond such margin of necessary-recoverability as is guaranteed by compensatory provisions in the system, must work alterations in all the chronology of the organism subsequent to that stage; and as the contributory media—food, heat, opportunities for use, etc.—are necessary factors in the functional-activity, alteration either in the quantity or the period of their occurrence constitutes a natural means of variation; the variation being improving or deteriorating accordingly as such alterations lessen or increase the total of consonance in the simultaneous and successive physical activities.

Finally, the modification of the individual tends by heredity to change the type more-or-less, if the chronological-processes have been affected in the series of repetitions which among them arrange the *primary chronology*,—that, namely, of the procreative germ.

§ 5. What the above Generalisations Explain.

In all that has been said in the preceding remarks, we have, though the term was purposely omitted, been handling the modern doctrine of EVOLUTION; the great generalisation which Mr. Herbert Spencer

in the theoretical field, and in the concrete realm Mr. Darwin, have recently so greatly advanced. Along that path everyone must henceforward follow in their footsteps.

The views sought to be formulated above seem to give solutions of some puzzles in connection with these matters.

1st. They explain how, in cases of variability, the modification usually appears at more than one point of the organisation,—the points often being widely separated; and, also, why the change, though it ordinarily includes more than a single characteristic, is more-or-less limitatively located. The alteration of a chronological-grouping in the system obviously must tell throughout the extent and ramifications of the term to which that grouping belongs, wherever its demarcation lies; while experience shows that if such alteration does not disturb beyond certain bounds special elements in the associated-systems of physiological-activity, it only works change in precise parts of the organisation,—not affecting the general consitancy beyond that range. From this fact, artificial breeding gets all the possibility of its wonders.

2nd. We in these ways find it explained why parts of the old, the historic type of an organisation, appear in early stages of the developement but fail to mature themselves,—why new features which do mature may be temporary in the individual,—and, also, why it is

that in the later periods of existence there may come to be increased agreement in the characteristics of individuals, exhibiting more of a family-likeness than they showed in the earlier period. For instance, taking the first-named case, if (as Mr. Darwin points out) in polled Suffolk cattle, rudiments of horns can sometimes be felt at an early age and not afterwards, it is, we may conclude, because the old series of physiological time-relations in their organisation holds good up to a certain point of developement, and that then, owing to an accumulated-preponderance of the new causation, there is enforced a change in the sequence, one which either shuts out some chronological element or brings in another which includes or overrides it. So of the other cases. If the new characteristics disappear as maturity is reached, it shows that the modification of the chronology was only effective to just that stage of the series, the disturbed consentaneity of the old time-relations again asserting itself. And if as members of a family grow old they startle us by certain resemblances intensifying, it must be owing to the circumstance that, as the activities slacken, the common primary set of chronological-arrangements is no longer so much overridden by special additions.

3rd. There is a possibility, too, of understanding in the light of the above generalisations how it is that the liability to reversion rises with increase in the

number of points which artificial breeding has varied, and, also, why there is more certainty of propagating a variation in a plant by means of a cutting than a seed. In the case first named, there is greater risk of all the precise repetitions required in the contributory-media not occurring in their completeness, and if failure in any of the interactions of the new causation happens, the whole of the results necessarily tend to be lost. As to the second-named instance, it is plain that in the cutting of a plant the formative-arrangement of the organisation stands at a later stage of chronological-developement than the earliest one of the seed, which is the last process to feel the full effects of the new causation ;—indeed, only that in the case of animals above the very lowest forms it is impossible to include the whole of the chronological-arrangements of the system in any dismembered part, we might expect the same thing to hold good of animals.

4th. Intelligibility is given to the fact that excess of food is a chief means for obtaining variability. The presentation of superfluous atoms in the processes going on for effecting growth and repair tests to the fullest extent any play appropriation and assimilation may be capable of; while, for any auspicious occurrence of the other contributory-media to have its full effect, nutritive-material in plenty is required as a complementary condition.

5th. The reasons can also be seen, why crossing of breeds adds vigour,—also, why it gives a tendency to reversion,—why close inter-breeding is injurious,—and why some styles and degrees of variation involve sterility. Crossing gives a chance of any defects of the germinal-arrangement in one breed being supplied by the other, or even, it may be, of securing improvement, if there be no positive defect; this occurring through the more primordial-constituents of the germ on both sides coming together to the prevention or exclusion of the less vigorous. On the other hand, these primordial constituents would be likely, while agreeing in this bettering at the more rudimentary stage, to introduce, in any case where they did not fully succeed in combining, ill-assortment in the newer, less habituated, more complex adjustments of the recent variation. Lastly, the sterility of some styles and degrees of variation is not hard to understand when we remember that the backward-working chronological term needed for the perfect reproduction of the germ has been altered, and that, if the germ is in the least perplexed, it will necessarily neither be equal to procreating the old characteristics nor the new ones.

6th. By the light which these fundamental principles give, we can comprehend how it is that an organism is developed according to a plan which seems at every moment to be in advance of the

stage actually reached, and why repair of injury is possible sometimes to the extent of replacing important members. With respect to the first point, in so far as the chronology of activity is suited to and prepares further coincidences in respect of the media, the developement will naturally run forward into the future; and as to the second point, if the injury sustained does not destroy the whole of the chronological-series determining that part of the frame damaged, but leaves enough of it to be efficient initially, then repair in such case is as natural as was the first developement.

7th. These views, further, make it reasonable to expect that there should be inscrutability in both improving-variation and degradatory-reversion, the effects in each case seeming disproportionate to the causes apprehendable by us. It depends entirely upon the stage and the order in which the chronology of the physiological-developement is helped or hindered, what the sum of its whole effects upon the fortune of the organisation may be. A happily-timed gleam of sunshine falling on the soil where hides a vegetable seed, accompanied or closely followed by the tiniest puff of unexpectedly-softened air, or, in the case of an animal embryo, a prosperous hap of enlarged nutrition offering competitive constituent-atoms at this-or-that moment, may have results cumulating at every subsequent stage of the perfecting of the

organism. The logic of this final style of causation is only to be understood when all the other lessons of Science have been learned, for vital organisation is Nature's masterpiece, summing up in itself all her other processes. But there can be no doubt that the principle of the method is the chronological-transposition of activities by operation of the contributory-media and by natural causative alternations occurring in the elementary physiological-processes and their inter-reactions.

§ 6. The General Reasoning supporting the Doctrine of Evolution.

The question of how far development has been lineal, directly or collaterally, is matter-of-fact to be settled by research, so far as research can go. All the primary scientific-generalisations set forth in the earlier part of this chapter lend themselves to the supposition of Evolution being the method of physical-activity. Organisation is but elaborate systematisation of such activity, and for every new phenomenon it offers, an old one has to cease in an equivalent quantity. In so far as that which is in question is merely a case of interhappening of statics and dynamics,—that is, of structure forming part of the general Executive System,—we are, as was above pointed out, practically dealing with Motion; and if Motion's natural propagations, with all the

possibilities of their developing complexity hinted at earlier, are sufficient to account for the interquantifications Organisation shows, what is the objection to resting in that explanation ?

That is an easy and very simple way of putting it. The truth is, that, though the numerical proportion is decreasing, there are still in the bulk of minds very natural objections to this view. It disintegrates a number of the intellectual and emotional neurotic-diagrams connected with certain dogmatic beliefs in ways and degrees which give great pain. Elsewhere the question is dealt with as to whether there is not some mistaken exaggerating of the extent to which the doctrine of Evolution does permanently run counter to a part of those dogmas, but that the disintegration in so far as it effectively operates, whether it arise from mistake or not, must naturally give disquiet and pain is clear. It is, however, we repeat, a matter to be necessarily remitted to Science ; for if Science establishes the facts of Evolution, those facts, by virtue of the generalisations so framed, will, in the very framing of them, come to command the fundamental neurotic-diagrams. Whether or not the integrations so supervening will be superior or inferior in the consciousness they give is a point to be unfolded by our destiny. It is not of much use discussing it, excepting under this one aspect of it, which will inevitably present itself,—viz., that it will introduce

a strange, unhappy stultification into our intellectual-sentience, if it should prove that the earlier illusive beliefs were superior in their validity for framing parts of the higher style of emotional-experience. But that is an issue not to be discussed in this chapter. The question of Evolution must be decided by Science, accordingly as man acquires knowledge respecting the past events and the natural methods of the Executive System. That there is going on an accumulation of evidence in support of the theory, in so far as concerns physical-organisation and the acquirement of habit in certain provinces of life, it is impossible to doubt.

The one point as to which those whom, for the sake of convenience, we may class as anti-dogmatists can never be quite sure, is an apparent arbitrariness in the fixing of the limits of the Law of Effectiveness. If human sentience were in some way fully commensurate with the operations of the intellectually-inferred Executive System, all would be left necessary, without the suggestion of anything not scientifically calculable. But it is not so: only certain specific traits of Organisation are valid in respect of human consciousness. It is a wild speculating as to possibilities when we go beyond that range, but, at the same time, the circumstance that there is a scientifically-demonstrated beyond of possibility has to be recognised. An alteration of the initial law of human

consciousness, determining differently the—so far as we can see—arbitrariness of the actualisation of the Ego, might enormously alter the facts of man's experience now as compared with that experience in some past periods. It is hypothetically possible that man might in this way “fall” from any number and from any height of sensorial paradises. But the operativeness of such a recognition of mere possibility as this will rise no higher than just the degree of it which is left after its practical controlling by the influence of the general apprehensions which Science gives of the historical developement of the world; taking in among those apprehensions the relations of the human creature to the beings of lower grade, with the way in which their history would be affected by the assumptions in his case, and so forth.

Returning to the point strictly in hand, namely, the general likelihood of Evolution being the method of physical-organisation, there seems to be a rational presumption that the field of the later developements would be intra-uterine, as it may be phrased, not extra-uterine: the bodily-scheme of the creature which was to show further typical progress being existent in the uterus partly-preformed, and in a state which may be termed that of structural-flux. It certainly, also, would best agree with an economical plan in our mental experience, that this should have been the method, since such historically-traceable developement of Organisa-

tion would mean a widening of the field for intellectual activity. Finally, some kind of affiliation of the lower creatures to an original common stem would seem required to give us fully the right sympathetic emotional-interest in them. However, it is, we repeat, an issue which will finally be decided by the intellectual operativeness of the facts disclosed by comparative anatomy, embryology, and physical science generally.

So much must be said on the affirmative side of Evolution, as far as relates to questions of physical organisation. But that in the case of our socially-conditioned emotional-sentience, the supposition of a development proceeding on the line of direct immediate Utility seems to break down is a conclusion fast coming to be admitted. This, however, is a point which can be better taken up in another place, namely, in the following chapter on "Evil."

In the preceding parts of this present chapter an attempt has been made to supply a set of formulæ for the classification in a comprehensive way of the primary facts with which Science ordinarily deals, and when looked at closely, a general principle of Evolution underlies each-and-all of them. It is, indeed, the only fundamental assumption available as a scheme for the intellectual activity; details in every department having to be obtained as Science is able to gather them. We now may pass to the final aspect of the subject yet remaining to be dealt with.

§ 7. The Great Ameliorating Work of Science.

It hardly needs repeating that it in no way falls within the plan of this work to attempt any detailed record of the achievements of Science, either as widening the range of our mental experience or as practically improving the condition of our individual and social life. But a word of general comment, critical not merely eulogistic, may be added as follows:—

A certain hardness of fortune, as we may venture to call it, in the arrangements of the human lot might conceivably be altered or remedied in either or all of the three following ways:—

First, from a re-arrangement showing itself of man's egoistic-actualisations by a modification of the Initial Law of Consciousness, so that some or all of the risks of painful disintegration of experience might be avoided in the way which was above spoken of as hypothetically conceivable. It is plain that nothing of this kind is happening to the human race. Secondly,—taking that fundamental Law as remaining unaltered,—a certain enlargement of natural faculty in ourselves, empowering us optionally to deal with the order of Nature more easily and effectually, our bodily organs being enlarged in range and heightened in ability, would have been the next directest way. Third, there is another con-

ceivable mode,—that of man's finding out possibilities of making the causative-order of things, by means of aiding, helpful scientific-contrivances devised by him, better adjust its events to himself; modifying the order of the happening of things, and, practically, enlarging and heightening his own bodily-powers and organs by the means of external apparatus.

It is this latter laborious, slower, but, as some of the prior reasoning seems to suggest, more humanly-valuable method which has been allotted as the mode of man's progress. No addition needs here making to the eloquence which has grown nearly commonplace in the eulogising of the steam-engine, the electric telegraph, etc.; but it may be pointed out that by the microscope, the telescope, the telephone, etc., the very same enhancements are made to the possibilities of our sensory-experience as would be got from an enlargement of the powers of the bodily-organs themselves. The machinery Science offers is really an extra bodily-equipment. It is part of the task of that progress which we name Civilisation not only to re-arrange and finish the world a little more suitably for our bodily wants, but to give us this needed complementary-perfecting of organisation by detachable-structure outside us,—an instrumental external apparatus, instead of an internal organic developement.

What limit there is to this progressive ameliorat-

ing of our mortal lot no one can say. One reflection hardly can fail, however, to arise in the mind of the reader,—the progress comes late in respect of many generations of men, and even is defective for us now living when compared to what we can hopefully forecast for posterity. Those facts form part of the great problem of “Evil,” upon which something is sought to be said in what immediately follows. Here we are only dealing with the positive achievements of Science in extending the scope of man’s intellectual range, heightening his practical ability, and improving some portions of his emotional-experience.

The glittering series of wonders Science promises to man in all these respects is only beginning; it is hopefully certain that she has infinite surprises and blessings in store for the human race.

CHAPTER XVIII.

THE PROBLEM OF EVIL.

§ I. *What Knowledge would be Nceded for its Full Solution.*

SUCCESS in any attempt to follow this problem into its details,—seeking, that is, to solve it *particularly* in all cases,—could only be hoped for if every other secret of the whole system of things was known. For instance, we must first be assured on these points:—

Whether there is or is not a future life for man, and, if there be, we must be made aware of how what has passed in this world determines what shall happen in the next;—we need informing positively whether the sentient beings now existing here *have* or have not had any previous existence, and if their present condition has any relation to prior conduct on their part,—reminiscence at some stage in the future being likely to be enlarged so as to connect the present life and what went before it; exact knowledge is wanted as to whether the appearance of waste in Nature, in the superabundance of propagation and the struggle for existence,

is waste really, or if the events are an economical manipulation of material in the way of preparation, distribution, and balance;—finally, the kind and degree of sentiency in the lower creatures, and whether or not there are any secret mitigating laws which come into play in their case at critical moments, would also require to be known by us.

What is the extent of our knowledge on these points? Some of the matters are so removed from our cognisance that they seem too wild even to be formally stated; but this problem of Evil is the final one, and no conceivable possibility having a hypothetical bearing upon it can be prudently left out in considering it.

*§ 2. The Limits within which the Question can alone
be dealt with.*

It is plain from the above statement of omniscience being required in respect of the system of existence in which we are before any one can attempt a full solution of the problem, that it is idle attacking this question of the existence of Evil in its full terms. If it should be preliminarily objected that no state of existence could be considered theoretically satisfactory if our sentiency in it included at some or at any moments of the career enforced-experience, which, at the time, we wished was different, and in respect of

which effort was demurred to on our part, then all consideration of the matter is futile. But, surely, no human mind, while kept rational by the partial dearness and sweetness and welcomeness that breathes often over our common lot, ever deliberately made such a huge demand as that would amount to; since it would practically be asking for an altogether different creature than man, in a wholly new world quite other than this. Such high uncontrolled-pitching of the issue hanging in debate can only occur in the heat of controversy, when the wits of opponents are intoxicated by intellectual pride, and after the arguing has become merely verbal. There is no prospect of dealing with the subject in any way of profit unless its statement can be first reduced far within those limits.

Let us at once try to make such a reduction.

If instead of contending that there should be no period—however minute—of existence in which we wished that the sentiency that was being had was different, we ask only that existence shall comprise a future time when the glad life then enjoyed shall refer back in some manner of reminiscent-connection to the other consciousness, demonstrating to ourselves that a present heightening of gratification is owing to that ill experience occurring; the effect of apprehending this being that it shall be inconceivable to frame a notion then or afterwards of its having

been better for the series of experiences so related not to have happened,—would that partial solution be acceptable as being, in the language we ordinarily use, reasonable so far as it applied and extended? If dogmatic beliefs are necessary to carry forward any answer to even this extent, the question—unless the preference be at once altered for the contrary pessimist view—naturally arises whether that necessity is not a presumption in favour of Dogma? That is, if the supposition be not rebutted by the state of things actually experienced being so bad as to contradict the likelihood of the truth of the promises so held forth, or unless the necessary interpretation of the system of the world generally makes it, in some way of moulding mental-habitude, impossible to entertain the feasibility of Dogma, specifically explaining the arising of any such belief as an illusory phenomenon;—though this latter issue really runs back into the other alternative, since a world in which dogmatic assents could illusorily arise can only be saved from the charge of being radically bad by bringing in some of the mitigations of moderated-demand and mere reasonableness which lend themselves to the possibility of practical efficiency in dogmata being a kind of presumptive evidence of their truth.

In the limited statement of the problem above attempted it will be seen that we are really asking whether it is possible to agree that present unhappy

experience can be compensated by-and-in future better sentiency arising out of it consequentially? The question whether in the case of man Evil is so redressed in this life, or if things point to it ever being done in another existence, must be settled entirely by the evidence which is found relatively assignable. But it clears the ground preliminarily, if we are able to affirm that such a hypothetical supposition does not fundamentally shock the human reason to which the appeal in this inquiry lies, and with the faculties of which we have necessarily to carry on the investigation itself. So far from that occurring, we may at once say that a sort of familiarity which is straightway recognised in the notion bears witness to the fact that all our experience actually discloses this very plan. We are continually becoming reconciled to things and doings to which we at first sorely objected, and after the reconciliation there follows often a still dearer acquiescence. If, then, it could possibly be shown that this principle—that of taking in the prospect of existence as well as the instant experience of it—is so far successful in the result that we find ourselves in respect of many of the worst cases of suffering continued in sentiency until a time comes when we are thence-forward content, and more than content, to have attained the benefits which are then enjoyed by means of the pains passed through to reach them, is not that,

so far as this glad acquiescence extends, a vindication of the system of things from any reproach of being, fundamentally, either sinister or accidental?

Of course, as is above sought to be hinted, the consequence ultimately resulting must be more than mere habituation to the state of things which had prior to that been actually ill, painful, dissatisfying experience; there is required to be a positive multiplying and enlarging use traceable, giving a clear enhancement of value in the sentiency,—a heightening, that is, which we should be willing to gain over again, if need be, at the same rate. If, moreover, a full consideration of the circumstances should appear in the best, most authoritative moments of our consciousness to give grounds for a surmise that there is a utility of this high prospective kind in the very problem itself not being fully solvable to demonstration on common occasions, doubt being, in fact, made necessary at some other times for these very ends, then, does not this take the solution as far as, from the nature of the case, it can in a deliberate moment be asked that it should go? For with respect to this latter point, it must be remembered that if, after getting a first glimpse of it, we could always realise in a fully effective way of Imagination the prospective consequential-enhancement of experience, the present ill would, so to speak, be thenceforward done away. The problem of Evil

would, in fact, in those circumstances be practically set aside. The Positivist philosophers, as we will more fully indicate later, do really, no less than the Christians, try to bring into play as fully as they can this curative power of Imagination.

But for the present we may stop a little short of that final presentation of the issue. The fact of subsequent enhancement of experience being admitted would not in any way of logical technicality close certain collateral issues of the inquiry. For instance, any one who did not, when the solution had so far advanced, feel a self-diffidence of judgment growing up within himself, might ask if the amount of suffering was not greater in many cases than is needed for giving the desired subsequent degree of enhancement? But, indeed, that scarcely is a fair way of putting it. There is in the other position, an assumption that the Intellect is not to push its process as far as it can do. Supposing the point just hinted at be framed as Mr. J. S. Mill put it,—viz., may not the Arranger of the world have had to work in a defective material,—it would have to be considered whether it is not debateable, unless the discussion is to be foreclosed before the dialectic process has concluded. It is true that this altered issue is only a fresh raising of the original question of Evil, in a way which, though at first sight seemingly mitigatory of the difficulty, is not finally so;

but this has to be shown before it can be demurred to on that score. But the other specific condition implied in the above statement of the case we have attempted, is one which a controversialist on the pessimist side may insist upon without any qualification,—namely, that the enhancing rectification of things which is to make Evil cease to be wholly non-understandable must in some way happen to the individual,—not to some far-off posterity of the Race.

In this preliminary review of the issues, there were, as will have necessarily been gathered, two courses open,—viz., to present the problem pessimistically or optimistically. To have adopted the former mode would scarcely have left any possibility of discussing it,—after its details had been denunciatorily recounted there would have been nothing further to be done; but, on the other hand, in trying to set forth the affirmative side, the favouring assumption itself, after being put forward at the outset, should be at once pushed back as far as may be pending a strict scrutinising of the proofs offered. It is to this latter task that we now go.

*§ 3. The Intellectual and Emotional Uses arising in
Respect of Pain.*

In how far—for this is the first step to be taken—can it be made clear that it is what we name Evil which gives the opportunities for the economies of

duplication, extension, and heightening of human experience above the sensory range that have been pointed out from time-to-time in the preceding inquiries? Whether this supra-sensory consciousness is in itself worth having, we will consider later.

At the beginning, let us state the case in a rough, hasty way, putting it at its broadest so as to get at once in evidence the general facts. It is certain, then, that, if it were not for Evil, it is inconceivable that we could have the present scheme of Emotions. They are all got, in every instance of them, from the possibility of pain arising in the sensory experience at some stage and in some mode. But that is stating the thing too meagrely. What is really implied is this,—that it is in the evading or the mitigating of this risk of pain that what in an earlier chapter was described as the Good consists; the multifarious business of life which is so necessitated progressively-developes, owing to the fundamental principle of means becoming ends, feelings of far wider range—whether or not of higher value—than any mere simple sensory pleasure, if sensation could be imagined by us to be capable of rising into pleasure without its antithesis of pain. In a word, apart from Evil, no question of Conduct, as we at present understand that term, could arise; and, consequently, human experience, so far as we now know it, could never be more than sensory in some non-emotional way.

The point may be pushed further still. It is impossible to think that there could be any egoistic-experience at all such as is now presented in human consciousness. The present mode of actualising personality, which we have seen is fixed by the efferent-activity, would be gone, with no hint given to enable us to conceive a different mode. Man is a creature who, in the egoistic sense, now only has his being in-and-from his doing, and unless he possessed some spontaneity in a way of permitted creative-ability, then, in the absence of Evil, including under the term the mere possibility of pain,—that is, if there were nothing to avoid,—there would not be anything imperative for him to do. From this it follows, too, that sphere for anything like Intellect there would be none. To that point we will return in a moment. But, assuredly, if the creature so existing, and in some way answering to man, could have the experience of personality at all, there could not be any of the relations now termed moral either between him and a Supreme Source whence he derived or between different members of the species. For, if in his experience this being knew of nothing but something answering in a low non-emotional manner to that which we now call simple sensation,—the occurring of that being made inevitable and non-deficient,—thankfulness for enjoyment would have no cause, since

he would not be aware that his state could have been different. And if men could neither injure nor benefit one another, even if some utterly strange society arose out of a gregarious instinct to that end, they could have no feeling of indebtedness one to another.

But we said that the Intellect could have no occasions; the point is one to be followed a little further. A dream sometimes flits before the mind, that, along with the existing arrangements of things, there might be subsidiary laws in Nature coming into play when catastrophe threatened, which would, by temporary suspensions of the general laws, prevent the ill consequences of what, with respect to the special result in those cases, may be practically called miscarriage. A little reflection, however, shows that this would be tantamount to the present laws not operating at all,—at any rate, to their not showing themselves to us; the necessary consequences would go, and with them would go all our present apprehensions of the possibilities of causation. As stated in the chapter on “The Intellect,” we only get the mental notions we now have from the sensory-impressions being broken up, failing ever-and-again in catastrophe, in some way suddenly altering their order; doing this, however, as we learn from accumulation of cases, in a set manner of repetition, despite, subsidiary variations, which agreement in

the midst of diversity, in the end, suggests how it is that the accident does not happen when it does not do so. As soon as we know so much as that, we have a scientific idea; in other words, the neurotic-diagram adds a related grouping of efferent-activity to the sensory-impression, giving the possibility of imagining the latter's not happening, with a reason for its omitting. The duplication of sentiency got from consciousness of the alternative executive-possibility and of the mode in which the alternative is decided, including the resulting ability to manipulate the processes of Matter, is in fact the intellectual experience. In no other way than through this shock of sensory-impression could man, so far as is now imaginable to us, ever frame the scientific idea of a law behind the appearance, including the executive-process of a physical event's occurrence and its non-occurrence. Attention would contract to the narrowed limits of the current sensory-impression, or rather would never expand to the wider intellectual ones, and there would, necessarily, be proportionate abatement of thought and feeling. In fact, consciousness in every kind of it above sensation, would dwindle to the precise extent of the shortening of the far-reaching line of hard consequences.

Let us see, then, what is the conclusion at which we have arrived by this first rough way of inquiry

as to the operative uses which are developed in respect of Evil. It is this, that the elimination of Evil would have these results,—it would leave us without our present Intellectual Apprehensions and without Emotions, if it did not take away the present fashion of egoistic-experience altogether.

§ 4. What does this Conclusion amount to?

It is open for any one on the other side of the debate to reply that this reasoning amounts to nothing. He may say that it simply consists in taking the present state of things, and attempting to explain what there is in it not wholly unsatisfactory as arising out of the very defects of it: all this praise of the Emotions and the Intellect being, in effect, an eulogy of Evil. There is, on a first view, not a little cogency in that retort. But, in reality, it is only in this way that you can effectively bring into view how much there is in the state of things that cannot be classified as Evil; while the very circumstance that you are compelled to this mode of expounding what is welcome in the world, speaking of it, that is, as if it arose out of Evil, has its own significance,—since it implies that the general description of the world somehow does not lend itself favourably to the pessimist supposal, but leans to the contrary view. The logical position may, however, be briefly put in another way:—

The above appearance of attributing all that is good to Evil arises from the fact that necessarily in the first setting forth of the problem the word Evil and the phrase the *general state* of things in the world had to be assumed to be synonymous terms, for that is of the essence of the pessimist view; and, for all purposes of strict ratiocination in this enquiry, anything welcome which is to be found in the world may be spoken of as arising out of Evil, since it certainly arises out of the scheme in which Evil is included, and it is really the total tendency and final working of the cosmical scheme which are being sought after in the discussion. All that seems fairly open to the pessimist is to urge that his objection is this,—that egoistic-actualisation and intellectual and emotional experience are not worth having on the terms. He may restate his general allegation thus, —that if man was to be and to have sentiency at all, the system of things giving it ought to give it in some other at all times wholly-welcome way, if the world was not to be open to the charge of being a failure to that extent. But we have already demurred to joining issues so unlimited.

Scrutinised to the bottom the exception thus taken really amounts to this,—that our egoistic-actualisation gives from time-to-time an ill Emotion which discontents us with life while the feeling lasts. But it is as to the possibility of doing away this very specific

Emotion that we are now inquiring. If the set of facts we are seeking to put in evidence tends to cure this feeling, the conclusion above formulated is not to be condemned as amounting to nothing. In fact, the whole solving of Evil (for the puzzle of why the lightening of it did not come earlier would then most likely be explained in the moral experience of the Ego) would be effected practically by the arising of a new Emotion in us, which was strong enough to over-ride such dissatisfaction at wrong sensation by contenting us with the wide intellectual and high ethical consequences resulting from it. It will be seen more clearly as we go on, that the problem of Evil does really narrow to this compass ultimately. The impossibility of such a feeling being framed may very legitimately be urged, and it may, also, be contended that the lingering puzzle as to the lateness of the solution in the history of the race really brings back the problem in full force, making it to be no solution. There is no theoretical answer possible to that objection in advance of the egoistic sentiency giving the earlier reply in the individual case;—still, it is a fact that outside this play of technical dialectic, all at issue in the debate is simply a question of the framing of a specific Emotion. If by some clearer, more abiding apprehension of such conclusions as we have above instanced, men were at a certain developement of experience made so far satis-

fied with their lot as to have no wish that it were altered, the mystery of the absence of that satisfaction in the case of earlier men, if it had to be supposed that it was absent from them, would be mitigated by a hope that a universe so gracious to ourselves probably somewhere held an explanation of that ancient secret. Especially would this be so in the case of any who believed on the added grounds styled dogmatic that it was owing to a historic racial-catastrophe, which had come about for reasons arising in the egoistic realm, and which involved slow rectification in a moral mode, the general human progress in the world having to wait upon that.

It, therefore, seems that anyone arguing on the optimist side is at liberty to go back to the above line of remark. He may ask,—

If Evil somehow fits in with this heightening effect upon our lot,—if from its existence we get all the business of Conduct, with its ever-ascending emotional-experience giving us the consciousness of relationship to the world and to one another,—in other terms religion and organised sociality,—and if, in doing this, it affords the range for the present play of the Intellect, pointing us directly to a progress of endlessly-improving Science, then is it possible to look upon that which does this, or lends itself to it, as fundamentally and ultimately objectionable? If out of the mixing of pain with

things we get the tenderness of the human emotions, and out of the efforts to avoid pain the bright clearness of the human wits, its existence as an element in the mundane scheme is, at least, so far generally vindicated that it shows an enhancing-use, pointing to the possible framing of an Emotion of Content in respect of it.

At this stage we have, therefore, got so far as this: There is no *general* objection to Pain on principle short of denying that present human existence is worth having, even after the enhancement of experience by Evil's being overcome is got; with the added suggestion of it not being likely that anyone will offer such denial in whom the enhancement of consciousness has risen high enough. It is, we repeat, a question of the obtaining or non-obtaining of a special Emotion.

§ 5. *The Problem restated in more Detail.*

But, as we earlier said, there arise in the detailed play of the Intellect a number of questions, the deciding of which one way or other must greatly help or hinder the framing of the above-named Emotion, or the giving assent to the feasibility of its framing, viz., such questions as these,—whether the pains we suffer are or are not excessive, and if they are rightly apportioned—that is, if the actual arrangement of them is the best, so far as we can

judge, to make them efficient for the admitted possible good ends ; and, as arising out of this, whether the result is worthy of an almighty, all-wise, and beneficent Cause?—for that is the form the matter finally takes. It is true that a man would not be likely to push those inquiries very hardly if he was satisfied on the general issue; but they might offer themselves in an order and with an earliness hindering that general satisfaction being reached. In the chapter on "Pleasure and Pain," something was said of seeming faults in the allotments of the occurrence of Pain. Let us, at the risk of a little repetition, again point out that the extent of the "irrationality" of Pain is greater than is usually thought. It will be found in the progress of the inquiry, that this tells favourably, not unfavourably, on the final main conclusion urged by the optimists.

It is a standing commonplace among the apologetics of this subject, that Pain, by accompanying injury, gives us warning, and so shows in its necessary working the function of preventing the unheeded destruction or deterioration of the apparatus. That this effect does partially come about in connection with Pain in the case of more-or-less adequately habituated structure, is, of course, quite true; but it should be understood much more clearly than it ordinarily is that it does so in a very roundabout way. In Chapter III. we saw that, from the circum-

stance of consciousness and the bodily organisation not being conterminous, it necessarily results that Pain does not accompany injury in all instances; further, that sometimes things and doings which are hurtful give Pleasure; that suffering, when it does arise, does not always perfectly localise itself; that the intensity of the discomfort does not necessarily show any proportion to the injury which is being inflicted; and that suffering often continues long after it has discharged this supposed warning-function.

But a still wider qualification of the matter has yet to be made. The common belief we are speaking of derives from the popular doctrine of the Will, and assumes that activity directly flows from consciousness, viz., that, on our finger, say, coming into contact with flame, we withdraw it on the prompting of the ill feeling. This is attributing to consciousness what is equivalent to a mechanical power of communicating and determining motion; but we saw earlier that this is contrary to all that is proveable upon the subject. Such bodily movement is and can alone be the result of physical structuralisation, and can only be started and guided by the propagation of impressions (that is, nervous agitations), including the repetitive connected-activities in the brain, which we term reminiscent when speaking of consciousness. A baby's limb might happen to be in contact with fire, but there would be no certainty

of its effective withdrawal, excepting in so far as the child's frame had acquired the structural-inter-communications for specific associative play of the nervous force. If the child was very young, and the habituation had only been acquired in the early ill-co-ordinated fragments of it, the little sufferer might push its body further into danger. In the case of the drunkard or the lunatic, in whom the muscular-connections are temporarily or chronically deranged, Pain will not necessarily cause a protecting movement. On the other hand, where the impressional-propagation has been perfected, coming more-or-less to dispense with the need for cerebral coincidence, since it then starts the efferent-activity from a lower reflex centre, the movements go forward quite irrespective of consciousness. The illustrations necessary to make clear these points have been given already in the chapter on Will.

The general principles there laid down may be briefly recalled thus:—Bodily-movement is the result of physical-structuralisation; habituated aptitude and accumulation of executive-tendency being determined by repair being started in the act of use. The activity so occurring may or may not appear in consciousness, accordingly as it is or is not effectively connected cerebrally in pursuance of a fundamental law fixing the limits of our experience, but if it should so appear and quantify sentiency, then imperfect-repetitio-

gives pain in lieu of the former pleasure; but neither the pleasure nor the pain has anything to do with the motions, either in prolonging, abating, or in any way guiding them. From first-to-last that entire process is physical, and would go on just the same, whether we had consciousness of it or not, though it happens in all the elaborate cases that, owing to the implication of the Intellect as well as the Senses, the physical-process either directly or indirectly occasions consciousness, as a result or accompaniment of the motions. To express the point differently, the movement which is thought to be associated with the pain is the result of sensory-impressions arising naturally in-and-from the activity quantifying the pain.

In cases where Pain is "endured," as we say, that is, where the first tendency to movement is stopped, it is because of ideation, or, more strictly speaking, cerebralisation supervening to that effect, giving to the impressional-propagations a different route,—that is, they are used up in higher, more complicated brain-processes, in respect of which, owing to structure to that effect having been obtained, efferent-activity is volitional. This, therefore, has to be the final summary for our lower experience, viz., that our sensory pains have nothing to do with our bodily movements; those pains, indeed, serving no *physical* use whatever.

If we go to the higher experience, the non-physical character of the Will is very distinctly seen. It is, as was earlier urged, the inevitable, perpetual complaint of men of high moral and spiritual consciousness that they cannot do what they would, and that they do what they wish not to do. Let us, however, follow up this further point step-by-step.

The superior Pleasures—the mental and the moral ones—have, as everybody knows, to be got through Pain. The intellectual-sentient comes to us only through large persistent formative-strainings of Attention, new cerebral activities slowly enforcing themselves; their success involving the disintegration of earlier, lower muscular co-ordinations of the frame generally. Education is so made irksome—is a painful bodily discipline. Well, here again, it is plain, that the pains have no immediate direct use. But it is in the supreme realm—that which is called the moral world—that this irrationality is perfected. There Pain positively has to be regarded as no longer objectionable; it has not to be dreaded, not to be shrunk from. On the contrary, every occurrence of it must be welcomed as giving possible occasions for mystical-activity in the Conscience. In a word, man has in the higher region of Conduct to make, as it were, the most of Pain, through all the degrees of aspiration which bring penitence. At the same time he is warned by those who here speak

the most authoritatively, that he must attach no merit to it. But far beyond the pains of the first penitent compunctions, the spiritual experience throughout is affirmed to be only attainable by renunciation and sacrifice. The whole matter, at its last stage, is, in fact, made perfectly paradoxical.

From this fuller statement of the case, it plainly suggests itself that it is to the very irrationality of Pain that we must look for the explanation of Evil, in so far as anyone can hope to solve its problem.

If, for example, it could be clearly made out that Evil is traceable to mere defect,—to failure in fulfilment of designs intimated by the general plan as being really intended,—that would do away all hope of a solution. Even if Evil at some future day were wholly cured by means of slow accumulations of scientific progress, this, so far from satisfying the human heart, if its enjoyments left it at liberty for reflection, would darken the mystery; for not only would there be no perfect guarantee for the continuance of the happier state in a universe which had unexplainedly permitted the other condition, but all the countless prior generations of mankind would have been, so to speak, sacrificed in combating partial inauspiciousness and attaining this state of improvement. That the fact of a collective-progress evolving out of the ill experiences of individuals, in a way too slow for any resulting compensations to be enjoyed

in this life by the individual, is part of the problem, has been already stated. What we now add is that this portion of the enigma is not made plain in any final way by supposing that it comes about in a "manner of mere defect; rather, we repeat, any hope of mitigating the puzzle lies in its being shown to be undeniable that physical Evil is an integral part of the present scheme of things, lying at the very root of it, necessary to crown it in some high consummation; and this needed inference is in great part secured by the fact that every human being comes into the world a child, and goes out of it after a short stay, in which, at best, only a little progress in amelioration has been made.

The general effect of all these considerations is this,—It is possible to point to the two circumstances, (1) that by the natural working of the physical scheme the arrangements out of which Evil arises, in giving sensory catastrophes, make man intellectual, but (2) that Pain itself is non-mechanical, and has to be borne more-or-less until its remedy is found out, or till it exhausts, as showing that the function of Evil is to render man something wholly different from an animated creature capable of sensuous titillation merely. Putting out of the question at this point whether his present experience is something worse or something better, it is incontestable that it is something different.

To have clearly made that out is no small advance in the inquiry. Let us go on to see how far this further fact is capable of lending itself to the possibility of a framing of the Curative-Emotion, on which, as we have seen, a practical solution of the problem depends. How far can man, in reflecting upon all that it involves, welcome the circumstance of being made a creature of this different kind, that is, made what is termed a moral being?

§ 6. Evil in its Function Exhibits Man as a Moral Creature.

The question now may be stated thus:—What would appear to be the general operative effect of such an arrangement of things as that just stated upon a being capable of sentiency in the way man is? It appears that its working must be to challenge a personality of this specific kind,—that the responsibility of each individual for the current actualisation of self in his own case would be always thrown a stage back. Nearly at the beginning of this chapter it was suggested as doubtful whether, in the absence of Evil, we could have any egoistic-experience at all in the mode in which we can now alone conceive it. If we stop short of going into those dialectical niceties and pushing the matter to the furthest hypothetical point, it still is obvious that there could at least be no spaciousness of self, such as we know it, no continuity and width of

personal realisation, save for the process of events having been made to be that of adaptive-means,—steps needing to be taken prospectively,—and, when the result comes, reminiscence arising of the doings out of which the result has in great part developed.

But what we have been saying has been too exclusively illustrated by cases of what may be called physical Evil, the penalties being those of bodily pain. The argument must again be made to include what is termed moral Evil,—that is, ill-yielding on our part to temptations of pleasure, sensory, mental, social; the technical description for this kind of Evil being acquiescence egoistically in the working of the apparatus at a low direct level, that is, as religious men put it, the not exercising an act of aspiration to the contrary. In these cases the issue we have been discussing comes out more clearly still. This assent to immediate pleasure can only be resisted by an affirmation of the self, and, on the religious hypothesis, the direct function of the pleasure which mingles with wrong-doing is to challenge the Ego to its own mystical proper assertion in non-acquiescence. But previous reasonings have shown that the Ego has no direct power over physical doings at all, muscular activity being the work of the material apparatus; we ourselves being fundamentally actualised by the activity, with, as it is alleged, a non-physical potentiality supervening in the egoistic-

experience, giving the final mystical phenomena of Conscience; the result of this duplicated actualisation being that we may find ourselves acting in violation of our wish. It was pointed out in the chapter on "The Will" how, according to the dogmatic view, this arrangement has what in common phrase is describable as the effect of great skill. Nothing that is done by the bodily-frame is actually ours, but everything of its doings is ours *virtually*; since whatever happens now, either in the way of commission or omission, was determined by the moral elections we mystically made previously. If the doing be wrong, it might, according to that theory, have been all different, if, in the prior critical moments of duplicated actualisation when aspiration was challenged, we had made the opposite self-determination; for it is affirmed that, in pursuance of an ulterior law, force, or power, then operating, modifications of structure, would at that time have been granted, coming practically into play now.

It is true we might not at that past time resolve upon the particular dereliction which has now consequentially occurred. The present event has been particularly decided, not by us, but by circumstances instigating lust in a special way, opportunity offering itself. Just as little, in many of the cases, when present conduct is virtuous, did we, in the prior right options we made, purpose in detail

these special acts of goodness. We are surprised alike by our crimes and by our good doings; we cannot perfectly appropriate either the one or the other. Only to a limited degree is any positive calculation of particular actions possible to us; those occurrences, which always more-or-less take the individual unawares, make up the business of this world's affairs,—the arrangement of which is not in our hands, but is determined in a way of its own working out. In following further this description of man as a moral being, it will be best fully to use the old terminology. All that the religious theory leaves to man is something deeper, something higher, something wider than the individual control of events; it is the decision of his character. What his aspirations may bring about in the way of doings he cannot precisely foresee, much less fix. In this way we are made wonderful to ourselves. Specific wrong actions may be planned, opportunities for them may be sought, may be laboriously prepared; but, in the longest train of malicious plottings, it is still a mere dynamical-activity,—a lower unmoralised, non-improved habituated-energising of the passions. If, after the ill is consummated, Conscience should stir, the amazed man will tell you that he awakens egoistically as from a dream; but the broader-eyed he becomes in the face of the consequences, the more penitent-stricken, unless by a certain mental habitu-

ation he has partly acquired a necessitarian persuasion, does he avow himself to be, from the knowledge that the full virtual responsibility of the dream is his.

This sketch of a creature with a personality of that specific kind (the responsibility of his present self-actualisation being always referable to the past, he having no power of actually determining what he shall do, but only what he shall be, this latter, however, on the whole, virtually deciding the former, since wrong-doing is assignable to structuralisation not having been better effected previously, though he will have, even when gaining improvements by aspiration, to do things against his wish, every step of progress having to be made by sacrifice of pleasure in the first instance) is a rough attempt at the detailed description of a moral being. The ultimate conclusion to which it points is, consequently, in the case of any who think their experience answers to it, this,—that the function of Evil is to exhibit man as a being constituted moral.

The again recurring question whether it is worth while to be a creature of this kind, may stand over for the present; but in order to man's being made moral in the style above hinted at, it was plainly necessary that Pain should be non-dynamical, and that it should be, as we have phrased it, irrational; in other words, that consciousness and organisation should not be full, exact correlatives; and further,

that man's egoistic-progress, in so far as it implies the alleged graciously-granted amendment of actualisation, should lie through penitence,—the experience of retrieval having some pain mixed with it. If a human being had a direct power over his physical-apparatus, we are forced to believe that Pleasure and Pain would work his decisions mechanically: neither the one nor the other could have had any influence such as the dogmatists describe as serving the use of being morally testing, and discipline could not have been made certain. Certainly as matters now are, Conduct, as before explained, in the higher region of the Ego where consciousness so subtilises, is a much larger, much quicker thing than the actual business of life. We rehearse the alternative possibilities of doing over-and-over again, practical opportunities not coming rapidly enough nor numerously enough to preclude hypothetical reconsideration; while the results of behaviour are often slow, far off, and much involved, nearly untraceable. In short, everything seems to happen so as to prevent any dynamical action of Pleasure and Pain in deciding structure. For be it always remembered, that the very same irrationality of penalty which holds of bodily experience obtains, also, in these moral affairs. A casual breach of social usage or custom may bring about worse ill consequences for a man than do some deliberate crimes; at times, wrong-

doing misses overt punishment altogether; it occasionally, for the lower physical purposes, will actually succeed. The poignancy of some of our compunctions of Conscience has just the same apparent absurdity as the over intensity of toothache or colic. Violent remorse may arise about trifles. In these ways, in the moral realm as in the bodily, all is made indirect, remote, giving, as it seems, an opening for sheer personal spontaneity: motives are perplexed, confused, transformed till they are indistinguishable; and we are left, finally, with only ourselves to deal with,—having to display personality by imperative egoistic-choices, made real again-and-again by our opposing and successfully resisting vague temptations of pleasure.

Anyone who is not able to see how the sublimation, the intrication, the confusing of motives can be carried to quite this pitch, will still be ready to admit, that, if the thing were to be done,—if there were to be something describable as egoistic-spontaneity,—this would seem to be a method for bringing it about.

The case now may again be restated in this way, —What would be the situation required to make man's life have the moral style above hinted at for purposes of retrieval of higher egoistic-actualisation, —that is, to give possibilities for affecting personality alteratively? The conditions would seem to be these:—

1. That a man should have no power of deciding instant bodily-activity, no ability, that is, to interfere with it as the process is determined by the last interaction of structure in cerebration, but that he should have a faculty in an ultimate egoistic-experience of aspiring differently.
2. That all his options in the way of aspiration, even though having the power of obtaining modifications of structure which will be available for the future, should need to be made on general grounds, affecting character, going beyond the requirement of any particular act.
3. That the dynamical-effects of the modifications of structuralisation should never be fully calculable by a man,—that his doings should always more-or-less surprise himself.
4. That the recollection of past Pain should cloud a little, and that the anticipation of prospective Pleasure should heighten, by the Imagination using only assorted, perfect co-ordinations; this disparity having to be neutralised by egoistic-affirmation, progress being only really made by resisting Temptation.

Every one of these rules, it is alleged, is found actually operating in human Conduct; taken together they frame the position in which the bulk of men assert that they find themselves. Summarily described, the situation is this:—There is no safety

for man but in perfect goodness, and he can only advance towards that goal by penitence effectuated in the renunciation of Pleasure. Nothing of this it would seem from the above reasoning, could happen for man here without Evil, and the fact has, therefore, to be taken into account as qualifying the existence of Evil when considering the character of the general scheme of being in which we are.

7. Is there any other Possible Ideal for a Derivative Being?

But is that view of the case absolutely the only one? Is there no ideal conceivable, if only germinally, of a derivative creature being other than an automaton without his existing in a state where he has to combat actual Evil? The mind seems to suggest that there is such a possibility, and, indeed, it was put forward in an earlier chapter,—if, for instance, there was a being who had been endowed with creative power optionally permissible within a certain range; the refraining from the using of that ability in some specific way as to which he had been authoritatively warned would seem to answer the same end of testing him egoistically in a higher manner. Again we come upon this strange old doctrine of a Fall of Man! It is impossible not to see that all that was above said of the present mode in which is ensured a moral condition

for man really amounts to conceding to him what might be called a mimicry of creative power. The sensations, etc., now arising in his experience have to be regarded as strictly phenomenal, though he has no awareness of causing them to be; while, if the mystical theory of the Will is accepted, all the higher facts of his actualisation are obtainable by him virtually, but not self-bestowable actually. On the face of it, this is just the state of things which would arise from a dwindling of a larger faculty. But, as was remarked much earlier, this easy solution by means of assumptions is one to be most closely scrutinised. The process once served, but, having been shaken by criticism, it is not possible for it ever to be re-established unless it be first shown how it mistakenly became discredited. This is too early a place in the inquiry to deal with that question fully. It will be referred to again later when considering the dynamical questions involved. There has at this stage yet to be considered the reasoning against the view taken by the optimists.

§ 8. *Some Objections to the Optimist View.*

What kinds, degrees, and quantities of suffering it is possible for wisdom, if it had the control of events, to introduce beneficially into the human lot here, so that the reminiscence and the apprehension of it at the times when the options in the Will have

to be made, should influence us morally so as to challenge egoistic-spontaneity without enforcing behaviour dynamically, is the ultimate form taken by the question.

First of all, it may be asked by way of preliminary, is this a question which we are in a position to pronounce upon? The answer to that last inquiry depends, as even the rashest judgment would admit, upon the establishment or non-establishment of certain conditions. We clearly are not in a position fully to judge if we admit the possibility of any of the enlargements carrying the range of the human lot backwards-and-forwards, as hypothesised in the opening paragraph of this chapter. A person's position in respect of this preliminary issue will again be settled by the circumstance whether he is or is not led to give assent to the beliefs which are commonly called dogmatic. If you are not so disposed, and in estimating the human lot have regard only to this life, without recognising any sufficiently-enhanced economy of Emotions as arising out of Evil, you may say that the facts of Pain clearly condemn the present life. But this general verdict may be delayed for a moment, while we turn to more detailed objections.

If it should be urged, for example, that the views above put forward do away with the culpability for particular offences,—as, for instance, that they enable

a man to plead against any charge of crime that he did not mean it,—it must be remembered first of all, that, in this inquiry, we have to do with the primary facts, and not with any awkwardness of consequences resulting from them. But it may be added that there is really evidence showing every criminal to have in his heart this secret persuasion,—every one of them in some way urges that he has been partially carried away in what he has done; and further, it must not be forgotten, that the views in the estimation of religious men, substitute for the particular offence the more tremendous guilt of Sin,—that of previous wrong options ;—in a word, presumptive depravation of character, only to be disproved, or even mitigated, by evidence of unusualness and special stress of Temptation. It does this in a way of which no earthly tribunal can take note, human judges being restricted to the individual offence; but, by means of this inevitable puzzle, there is an opening left for mortal pity and for any diviner compassions the universe may hold. The fact that the particular wrong-doing was not fully meant, gives a narrow meeting-ground of reconciliation for even the victim and the injurer.

A further objection will be certain to suggest itself. It may be said that this is making Deity supply the energy which is used for evil purposes. It is certain that man has no power of creating energy; all the force

that he displays is granted to him in some way. But that is not the whole of the reply which can be offered. It may be pointed out that, according to all the earlier reasoning, every increase of structure is given, in its first use, for a good act: that, owing to further additions not having been got by right options, it may come hereafter to be the means of Evil, need not trouble us in a final contemplation of the world's affairs, regarding them only in their executive-mode. That the merely physical events, no matter how terrible may be their aspect, are not evil in the sense of being ultimately hindering to Providence, is shown by the fact that they are made part of the concatenated scheme which it is admitted works out executive-progress. But if there be Supreme Wisdom at the head of affairs, so controlling things that they in the end give good results, those consequences are necessarily in its present contemplation; the actual events not being left ill in themselves, but being vindicated in the present by the final issues to which they are made to point. The Evil which is objectionable in respect of them, in the high absolute meaning of the term, would thus be that of wrong determinations of personality, these constituting what in theological terminology is named Sin.

This would seem to throw open a final realm of the inquiry,—spiritual Evil. But before attempting to say anything upon that point, let us a little

further consider the actual state of the case as it now stands.

§ 9. Is it possible that there are Exaggerations as to the Quantity of Evil actually Existing?

That there has been an enlargement in modern times of the quantitative estimate of Evil through philosophising respecting it by the light of the practical results of modern Science, seems certain. A feeling of intellectual-discontent with the state of things has recently intensified, in spite of, or rather, we should say, owing to, an increasing capability of avoiding bodily discomfort in many ways, and of heightening some of the lower kinds of enjoyments; for these acquired capabilities have suggested possibilities of things being adapted in themselves originally otherwise. Man's later better knowledge of certain of the executive-processes of the world seemed during an early stage of the acquirement of that knowledge to breed theoretical conceptions of events happening differently; so that, prior to some recent attempts at a philosophical acquiescence in the operation of Law, we had the spectacle of what was rather strange behaviour in an automaton, man offering incessant criticism of natural facts,—the puppet finding fault with the arrangement of the strings that pulled it, and suggesting hints of a world more satisfactory, if only he, the scientific inquirer, were

creator, not a creature. It is possible to give a list of some of these more modern incriminations of the scheme of things.

Modern Science, for instance, has perceived what appears to it to be waste going on throughout all the realm of Nature;—a thousand seeds are elaborately formed for one that is actually needed, and all progress of type in plants and in the lower animals is won by a competitive struggle, in which the weaker individuals give way to the stronger. The same thing is affirmed to be repeated in the case of man himself. Not only is there the fact of his inheriting defects and wrong tendencies as well as cumulative enlargements of faculty, but, in spite of his gradually learning the lessons of watchfulness and precaution taught by the commoner perils of his position, he is never safe from some newly-demonstrated possibility of accident,—momentarily-effected catastrophes as well as the subtler calamities of disease, which may, and in many cases do, stultify his plans humiliatingly, and end the present existence of himself ignominiously. Further, as Comte shows in his three laws formulating the historic mode of human progress, all advancement alike for the individual and the race is made through mistake, and illusion, and blundering.

Hardly anyone, however, even while reading this arraignment, can fail to have the suggestion again stir in his mind,—that, not one of these indictments rests

on circumstances which can be said to be wholly evil: in any and all of the cases, there turns out to be a mixture of good. By that last word, as mentioned in a much earlier place, a mere carrying on of the scheme of things is not all that is meant. To say that existence must commit suicide, or else pessimism is disproved and optimism made triumphant, would be a very short and a very ineffective way of dealing with the question. As Hume long since pointed out, a certain degree of avoidancy of final disaster there must be if things are to go on at all. But something more than this happens. The struggle in nature does on the whole give improvement of type; while from accident, disease, etc., arise the promptings and instructings of the Intellect, furnishing the opportunities for the generalising in which consists all the wider coherency of our mental experience; and, in that way the calamities, further, give the occasions for the natural appeals of social sympathy out of which comes a higher emotional-sentienty. This last general consideration would, in fact, at the outset seem to set up, in so far, a presumption against pessimism, but that is not the exact point we have raised; the issue now in hand is this,—whether in the modern intellectually-arising feeling of discontent with the history of mankind there is, or is not, working a fallacy, which gives illusory exaggeration as to the quantity of Evil?

For instance, take Comte's three laws. The persuasion that the prior generations of men through so many ages, and all men still during the early part of life, must be regarded as wholly wrong in the style of thinking and feeling, the human creature undergoing gross illusion in the theological stage of experience and being partially deceived in the metaphysical stage, constitutes a reproach on the world in which such things could be. But the inquiry arises,—in what does the wrongness of these two stages of experience consist? That a want of a knowledge of physics, such as that we are now approximately obtaining, made inevitable for these men many bodily penalties which are by us escapable or mitigable, is certain; and we are forced to believe that parts of their lower emotional-experience was not of equal worth with that which Science gives men now, furnished by the same executive-occasions. But, at least, this present perception of illusiveness in their experience which has been got from the late advancement of knowledge was not an added poignancy. In the nature of the case it could not be. Their consciousness, applying to it the present phraseology, was then as strictly functional as ours is now. Every one of the men and women who lived in those delusive stages found the experiences they gave perfectly real in their lives, just as children and non-scientifically habituated persons do so still; for

the earlier generations never passed into the positive stage. In fact, in the very terms of the formula, the later styles of experience were impracticable, were wholly unintelligible, or rather, we may say, altogether inconceivable to those having the earlier styles while the earlier ones lasted. It is only this generation now living, and, indeed, only a very small adult portion of it, which is aware how comparatively defective the human sentiency in those periods was. But if no critical objection was then urgible against the experience such as is open to men on the grounds of this later reasoning, then the exception taken now in reality complains that they had not at that time the style of experience which Positivists to-day have. The question of whether the consciousness they then had was worth having is the real issue.

It seems fair, then, to say that to the extent of that part of our commiseration with the past generations of our kind which arises on these grounds, there is a fallacy at work exaggerating the Evil which darkens the retrospect of the human race. All men until recently, so far as we know, and most men still, always excepting when they are philosophising, have shown a trick of self-pleasing melancholy in pretending to regret the loss of some delights which their predecessors had,—even those fully-equipped in the modern knowledge do this yet in the poetic realms which lie outside the demonstrated modern improve-

ments of Science. In reference to this latter region, a transformation of the melancholy has occurred,—it is now got from looking forward, not backwards; for some whispers of complainings have been heard from devotees of physics that they will not live to see the later, fuller triumphs of Science. But how difficult it is to get much misery from anticipating the future possibilities of an improvement of lot which we shall not share, is shown by the fact that every Positivist believes that this third state of mind in which he now exists is the final one. It may be taken for certain that men in the prior periods and the earlier stages of experience did the same; and thus were spared a depreciating comparison of their own condition with that of others existing in states of mind which they knew nothing of, and as to which they could not frame a notion in any dream. In a word, the late-arriving sadness of comparison is wholly for us; and here, once more, comes in the perpetual dash of good which mixes with the ill,—we have, also, the feeling of this modern comfortable escape ourselves into a comparatively better fortune.

Again, therefore, there would really seem to be in much of the modern critical philosophy, an illusive exaggeration of the quantity of Evil in respect of what may be called the sentimental experience witnessed to in the past history of man.

Now let us turn for a moment to the spectacle

of waste in Nature, which the later scientific exploration of her various regions throws open in such striking vistas. Is any of this only appearance of unthrift? It hardly needs mentioning that, so far as Science can make out, in all the vegetable world the destruction of organisation, no matter on what quantitative scale it happens, implies no ill-sentience. Injury in that sphere does not mean suffering. Even in the case of animals, including the human creature in the reckoning, cessation of existence, if it occurs by abortion or at a very early stage of the creature's life, means, in the former named cases, little ill consciousness, if any, and in the latter ones not much. The computations of failure of completion and maturity in these ways, which make such a show of black statistics, must obviously be corrected by a remembrance of this largely-qualifying consideration, or there will here again be a fresh exaggeration of the "quantity of Evil reckoned as subsisting in the scheme of existence at any moment. As the case now stands, the apprehended waste is mainly a non-consummation of certain operative-processes of the Cosmical Energy. But we do not know that we are in a position to decide whether having regard to what we may term the manipulation of Matter, the manufacture of elements, preparation of compounds, taking in the possibility of occult uses so arising, this organisation partly carried forward which, seen

superficially, looks like waste, is not economical storage and distribution of prepared material and right effectiveness of executive-procedure. Also, there again comes in the reflection, that this very condition of arrest of the process of things at different stages was requisite to enable man to get glimpses of the general laws, by means of a knowledge of which he widens his mental scope in a way of self-effort, and gains the power of managing Nature by means of her own methods. The question would, finally, seem to be, whether the cases are excessive numerically for that end.

The above thought, which is, indeed, continually reappearing, offers itself afresh if we go on to the third item of the catalogue,—that of the events generically described as accidents; the happening of which gives from time-to-time such a tragic aspect to life. In every instance, the occurrences are owing to the continuous operation of a fundamental law, which is approved as part of the physical scheme, and it is only through this continuity of operation, exhibited even in cases of catastrophe, that we can confidently generalise in respect of it. The fact that in the concatenation of events, gravitation, expansion, etc., in the unvarying effectuating of themselves, may be destructive to higher modes of existence,—that is, may be shattering to the organised systems which have been intricately elaborated,—is in no way to be

put aside; it is a problem affecting the general arrangement of such concatenation. For it is conceivable that a systematisation of physical operations might include more or fewer of such catastrophes, if the word arrangement applies to it at all. But it remains true that here, too, there will be illusive exaggeration as to the quantity of Evil, if it is not remembered that the force operating the catastrophe is vindicated generally by its indispensable common utility; and, further, as was before hinted, that it is impossible to suppose any way in which occasional interferences could be made, so as to prevent the, at times, signally inauspicious results, without destroying the feasibility of man's ever succeeding in generalising the law, and obtaining executive-control by means of it.

But a fourth particular has yet to be added to the pessimist objections,—namely, the fortune of the lower animals which share this world with man. As in the other cases, so again here, we have to ask whether it is possible that there is any mitigatory assurance of exaggeration in the appearance of Evil so sadly showing itself in that lower realm of life? There, indeed, a spectacle of awful cruelty seems interminglingly added to that of mere waste. Whole tribes of brute creatures in the sea and air, as well as on land, ranging from the monarchs of the Oriental forests to the microscopic inhabitants of a

drop of water in the smallest puddle anywhere, are the natural prey one of another. They are all in turn exposed to great calamities in defective food-supply, and injury by accident and disease, without the possibility of the self-help man acquires by the teaching of such experience. Also, if we turn to the domesticated animals, whose lot is softened in some respects if hampered narrowly in others, we see that they may and do often suffer much at the hands of man. If we select individual cases, the perplexity becomes terrible. Some dumb creatures undergo at the hands of some men usage which, if it meant the full sufferings which our instinctively-stirring sympathy suggests, could hardly be calmly contemplated as being the penalty of the wrongest moral behaviour. Moreover, Pain, so far as we know, has very little if any moral use in the case of the lower animals. This state of things presents us with a very dark enigma.

The matter is one as to which a restraint of prudence comes into play in dealing with it, lest if you speak wrongly you may injure both the brutes and man by favouring laxity of compunction. But at the same time courage should be shown in the attempt to arm ourselves against needless pessimistic sentiments by searching for all the possible mitigations. It is certain that there must be illusive exaggeration in the first sympathetically-started impression of the degree:

of ill experience brutes have when injury happens to them. We know scarcely anything of their style of sentiency; and without stopping to insist on the mere assumption that mitigating processes, such as fascination, stupor, daze in some cases, and in others hyper-excitement, may come into play at critical moments, we may be sure that most of the ill emotional heightenings which human creatures feel, added to sensory suffering, are not experienced by the brutes. All the analogies we can make out from our own experience go to suggest that the activity in their case which derives from instinct and is governed by it hardly passes into a mode of self-consciousness at all. "Then," may the pessimist controversialist at this point urge, "man is left a sport to illusive sympathetic impressions?" "Well," the optimist may reply, "it again happens, that granting this hypothetical evil, a practical good comes from it. It injures nobody our being left somewhat in darkness respecting the lower animals at the risk of proving a little kinder to them than is strictly needful." Without at this moment following those dialectics further, it is certainly true, that man's own conduct towards animals has ever been, is now, and must always remain, one of the chief tests of his morality. And for it to serve this end, it is clear that we must know about animals just what we do know; the matter being so left, that, although there is a

little doubt, it is an obligation to act as if animals have consciousness, since there is the due appearance of sentiency.

Further, it has to be pointed out, that terrible as is the spectacle afforded by mutual slaughter being made among so great a part of the lower creatures, the common mode of their subsistence, this very method, taken in conjunction with the other arraigned provision of excess in reproduction, has for its practical effect the multiplication of the individual creatures successionaly,—directly tending, in fact, to keep the population of the various tribes at the highest practicable totals. To say that in the scheme of Nature the *type* is only taken care of is but a striking statement of one half of the case; it is also true that there is shown to be everywhere acting, at any stage of the developement of the type, a propensity to multiply the *individuals* to the utmost. Again, therefore, an economical result develops which, if the life of animals is, on the whole, worth their having, has to be taken at its value.

In all these different respects, it stands, we conclude, reasonably and fairly made out, that when the question of Evil is being enquired into philosophically in the retrospective critical mode, the arguer on the optimist side may claim to have considerable abatement made of the pessimist's quantitative appraisement of Evil in the world,—

there being illusive exaggeration on all the above points.

Finally, under this head, if we revert to the question of the framing of an Emotion of Content with the purchased enhancement got through suffering, which we earlier saw would be thenceforward in the cases in which it arose a practical solution of the problem of Evil, we may nearly say that this feasibility is already proved in contemplating affairs on the large collective scale,—that of Society. It is, of course, in the individual case that the pinching stress of the difficulty comes, and that harder part of the inquiry remains to be separately dealt with. But, confining attention for the moment to the spectacle of the modern civilised community, is it not growing hard to object to the scheme of things out of which has arisen the public organisation, social and scientific, which we see around us in the ever-improving apparatus of our daily life? It is true that to insure against disease, the beneficent rules of health have to be found out and practised; in order to escape accident, and to regulate effectively the energies of Nature, other truths of Science must be won; to satisfy the wants which as human culture advances progressively multiply, the aid of machinery has to be ceaselessly invoked. But all this is being done with growing success; and note what arises out of this state of things. The

insufficiency of the individual calls into being the community, with all the grandeur of its public institutions, its associated activities, its common charities. In a word, it is impossible not to see that on the public scale Evil develops positive use and gives ultimate enhancement of experience. It is, in fact, there operatively successful, and men are coming so to admire the results that they find it hard to wish that the pain giving the promptings had not been, if the uses would have been lost by its absence. Even in the case of the calamitous misfortunes which befall individuals, although we have to sympathise in a regret made as keen as it can be, it is possible to see that they minister to a general emotional-life in the community in which all the experience is not painful. A public use again shows itself developing out of individual disaster.

So much as to the mitigatory considerations arising on general grounds. They undoubtedly are real as far as they go; but who is there who in a time of sharp trial will accept them as wholly sufficient in his own case or in that of any one dear to him? It is to that aspect of the matter we now turn.

§ 10. Evil as it offers itself in the Individual Case.

As already urged, it is here that the stress of the difficulty is felt. A picture can be drawn of human life as its dark possibilities of ill-fortune are ex-

emplified in the case of some specially-chosen individual victim of disaster at which the reason is almost paralysed, as well as the heart quite shocked. There are the catastrophes of hereditary disease, mental and moral, as well as bodily; the inexplicable sufferings and hideous humiliations of some hopeless sicknesses and strange bodily affections; the tragic horrors of accidents, with all the heightening of apparent indifference to calamity in the general processes of Nature bringing them about; and, short of those capital calamities, the perverse wrong happening, or non-happening of events, for which we have no other convenient name than ill luck. Further, taking up into this black catalogue the worst woes of all, there are the moral tragedies men inflict upon one another in heart, in reputation, in lot,—the least guilty often suffering most. Who dares to think of attempting any full explanation of these problems?

Taking all the advantage possible of the fact above urged, that a public use develops out of even these hard private instances, and making, too, the most of the possibility that the victims themselves may get some mitigation if they can master the practice of habitually referring the events of the personal lot in that general way, a solution of the enigma of Evil is yet wanting. For the plan on which we are constructed is that of sympathetic-individuality, and even

if by a rising into the sublimest region of enthusiasm we could put aside in our own instance, the objection that this plan forbids anyone being sacrificed utterly for the public good, irrespective of a final use in his own career, none of us could be willing to accept benefits gained so extremely at the cost of others. The greatest good of the greatest number is a maxim of human government, not a rule for the divinely-perfect sway of a universe.

It is time, however, if the inquiry is to be kept balanced and reasonable, to remember that the above picture takes even the individual lot at its hypothetical worst. No actual case fully realises the unbroken sombreness of that dark picture, if some at first sight seem to go very near doing so. To ask for examples of human beings willing to give up life, and to avow that they wish, on a retrospect of what it has given to them, that they had never had existence, is too wild a controversial stroke to be decisive. It is not conclusive to point to the frequency of suicide. Man is, according to every scheme for describing him, an emotional creature, capable at uncertain moments of doing mad things, and of saying wrong ones. The general teaching of a man's own experience, including in it his observation of others, may be said to be this,—that in no instance of a human creature's stay in this world is the experience all evil;—none, so far as can be ascertained,

undergo pain without admixture of comfort and pleasure. The average lot, it is allowed by everybody, has many sweet delights; the world frequently shows aspects which are so bright with beauty that all beholders are surprised into joy. Let it be granted that it is not with the average lot and the some-time aspect we are now dealing; it is with the extreme instances of the individual case. It was, however, necessary to recall that there is really no full perfect pessimist example. Still, there are cases so bad (and this is the admission which must not be delayed) that it is impossible to make them satisfactory to the reason and the heart within the limitations of the individual experience in this world.

Not a step can be made in hypothesizing a solution unless you postulate an enlargement of the personal career; nor can the solution be made formally perfect by a forward extension merely,—compensation in a future life might be made so rich as to silence all objection, even to stifle all repining, in the ways we earlier spoke of. But such a mode of attaining content would not, if the human intellect is to speak its last word, do credit to any conceivable Cosmos. The requirements for a full solution of Evil, in a word, point us backwards. Once more we arrive at that old doctrine of the Fall, and something further must be said upon it. But before following up that point, let us re-state the case on the pessimist's side.

§ 11. Final Statement of the Anti-Optimist's Case.

What, then, are the quantitative limits within which the anti-optimist will allow that this problem of Evil can be reduced? They would seem to be these,—First, that there is in the ordinary average lot *excess* in the ill-happenings viewed even with regard to a desirable offering of opportunities for the intellectual sentiency, and of occasions for the developement of the moral virtues with their emotional experience; second, that in some individual cases, where the worst extremities of suffering are undergone and beheld, there is no intelligibility whatever to be found hinting at a solution, for no suggestion of use in the personal career is offered; third, he would insist upon adding that in both those ways the general aspect of the world is made perplexing and saddening.

This is the pessimist case. On the face of it, it is one which is debateable throughout, and which requires large and complicated proofs. Supposing it were incontestably established that the softening of bodily pains and the increase in comfort bestowed in the later progress of the world by the discoveries of anæsthetics, etc., and the perfecting of the domestic and public apparatus of living by our growing civilisation, sufficiently gave the intellectual sentiency and the moral experience of virtue, we can never quite know that among the emotional-experience now

omitted there were not portions so valuable to the earlier generations which had the consciousness as to vindicate the historic condition for those standing at that stage, even if having reached our present point we congratulate ourselves upon not having the emotions,—the comparative objectionableness of them to us being owing to a modification of egoistic-actualisation which has been generally brought about in our own case by what we call progress. It is inevitable for a civilised man to prefer his state and condition to those of a savage; but to foist the barbarian into our place, that would most certainly be to work him evil; while sentimentally to complain that he is not a civilised being, and to object that a savage man should ever be savage, is to beg the whole pessimist conclusion by assuming that the lower stage has not proper satisfactions of its own, and that man whenever an addition is conceded to his fortune has a right to complain that it was not given earlier, and in place of something else which was then given but which he has now outgrown. Just so every man might protest against having been a child. As matter of fact, owing to the point being there brought home to us, not being left so vaguely open to philosophising, no one finds that childhood was wholly objectionable. Even after we have grown into manhood and appreciate its wider range, its higher powers, and its nobler satisfactions, we look back on the earliest days

with some tenderness, regretting the loss of part of their experiences.

That is the difficulty which the pessimist has to face as to the first part of his case. Putting it more concisely it is this,—the impracticability of comparing the emotional-states of human beings in different stages of egoistic-actualisation in such a way as definitely to say that there is no desirability of a fixed relation between the states and the stages, but that it would have been better if the happenings of the two had somehow been different. It is, in fact, hard to see how it can be said that there is *excess* in the ill happenings if the Evil is functional, and produces a strictly-proportionate result in emotional consciousness. All that could be said would be that the experience itself was not worth having, was of a kind it was desirable not to have, was generally objectionable.

But any debate of this first part of the pessimist's position runs on into a consideration of his second affirmation, for on what grounds are we to pronounce that experience is not worth having? The very gist of the anti-pessimist view is, that experience not wished for at the time may develope consequences so acceptable that later it shall be impossible to wish that the ill had not happened,—impossible not to be glad that it did occur. This is, in fact, a chief item in their offered solution of the problem of Evil.

Necessarily, they combat the pessimist's second averment,—that in the extreme instances of individual suffering the matter is left wholly unintelligible, no use developing in the personal career. They point to examples where the sufferers themselves state that in their experience the pain all turns to use; and, further, they urge that the absence of such evidence in the cases where it does not arise is in strict agreement with their dogmatic explanation. All that the pessimists can do is to argue on general grounds that those on the other side are wholly mistaken in all this, and that there can be no experience of a private kind such as that alleged which is not somehow illusory. This is a somewhat hardy controversial position for the pessimists to take up, for it seems to ask that they should deny the possibility of further evolution.

But, besides the statement of the pessimist case in the form of the above two great objections to optimism, it puts forward, as was much earlier mentioned, a claim to a superiority of its own on the ground, that, by rejection of Dogma and a concentrating of Attention on phenomena regarded in the positive mode, it practically ameliorates the human lot. Here lies the strength of the controversial position on the scientist's side. The dogmatists tried to hinder the progress aimed at in that practical realm, and they have been defeated with most fortu-

nate humiliation. Science has succeeded in spite of something that in the early stages was not unlike martyrdom. But, again, this triumph will not be permanent on the pessimist's part, if the dogmatists, without ceasing to be such, become also scientists, and show that human Attention admits of a management large enough to include both physical research and experiment and dogmatic belief.

This is hurrying the inquiry too much. It, however, seemed desirable to anticipate its whole course briefly at this stage. But we must return to the more leisurely management of the argument.

§ 12. In what way the Doctrine of a Fall of Man would seem to help the Problem.

It is matter of historical record that for many generations of men in all Christianised parts of the West, without turning to other quarters and tracing modifications of the doctrine elsewhere, the notion of a Fall of Man from a happier primeval state owing to an act of his own, did make the existence of Evil intellectually acceptable. To vast millions in the East there is not anything mentally objectionable in Evil now, for some moral puzzles which began to perplex Christendom early, long prior to the arising of the modern scientific obstacles in the way of Faith, are in the case of Orientals precluded by one of their popularly accepted dogmas ascribing to

each individual previous existences. The hard point arising in Christian Dogma as to how and why we should have fallen in a prototype is thus not met with there.

But the question which here confronts is, of what use is it talking of a Fall of Man to Modern Science which will not listen to a word of Dogma, and is wholly busy with a new doctrine of the world purporting to give its genesis, namely Evolution, which view it says is not dogmatic, but entirely scientific? Moreover, that the doctrine so put forward has, or promises to have, a working-completeness as far as the explanation of organisation and executive-operation later than the initial stage is concerned, has, as we saw in previous pages, to be admitted. It may be asked what, then, stands in the way of not intellectually resting there? There are just these three great facts which have been more than once instanced already,—First, that human consciousness has for one of its convictions the assurance that it is not itself commensurate with the intellectually-inferred Executive System; second, that all the events of consciousness are additional to that System; and, third, that Pleasure and Pain show a striking irrationality. In a word, a jurisprudence of limiting laws in the human experience and a method of cross-enforcement of special phenomena within those limits are developed, as to which physics

finally offer us only stultificatory ideas. Add to this that Conduct, in its admitted vindicating of the principle of self-sacrifice, shows that in the supreme law ruling throughout its own superinduced world of human affairs a non-physical style of operation has arisen. In the face of this impossibility on the part of Science to solve the problem of Evil, it was in a sense natural that she should in despair deepen the blackness of the picture, and heighten the importance of her own good task within her own realm,—that of laboriously lightening some of the bodily woes of man in mechanical ways.

Are the above three considerations enough to give any promise of the scepticism of scientists as to this dogma of a Fall of Man weakening? It is part of the possible dialectics of the case to answer that all that was said earlier of the position of complication which seems necessary for a creature in the present moral stage of man, if the higher phenomena of Conduct are to be further developed, goes to intimate, that, along with the increase in bodily ease and comfort which Modern Science brings and promises, there would arise some drawback giving the opportunity for a new kind of test. Is man's non-automatic challenging, furnishing the occasions for his alleged mystical faculty of egoistic-assertion, to come in the future more through the mental play than through the sensory tests heretofore availing? It is not possible to

say that the human intellect will not, to some extent, frame a calculus for the lower matters of Conduct, making computations on the score of self-sacrifice. However, in the present state of things Science has a warrant for using the only rougher method she has: she may rightly ask where is there any historical evidence of this alleged fact of a Fall of Man? Are there any indications of the world ever having, either in its entirety, or in any part of it, answered to the dream of a paradisiacal state? Is there any trace in the organisation of man of his having at any time possessed organs or faculties which he has not now? Further, does not the most recently-acquired instrumental means of Science,—the spectroscope,—show that the physical constitution of other far distant stellar systems is identical with that of this present world, while Geology witnesses to the earth being the same in its physical processes before man appeared on it as now?

Such answers as can be given to these queries have been already considered. There is, of course, the significant fact above instanced of the irrationality of the pleasures and pains of our present experience, but a controversialist on the pessimist side may urge that that is part of the enigma of Evil. Is there, he may retort, any evidence, for example, offered by the researches of physiology that the human creature ever had any sensory-

organs beyond the present number, which prior to dwindling, failing, or in some way practically ceasing, might have given him further kinds of experience answering to the other inferred changes of executive-mode, pointed out in the first chapter to be numerically in excess of the present senses? The answer is, that so far as Science has been able to carry the exploration of the human bodily frame, there are no physiological vestiges of disused sense-organs such as this incommensurateness between man's consciousness and the Executive System may be held to suggest a hypothetical possibility of. Whether or not the poets may have a vague kind of evidence to offer is a separate question; but who could decide whether the faint tendencies they might instance were survivals intimating past ruin or premonitions of some future enlargement of function? Give the poet the dissecting knife, and ask him to point out the physiological proofs, and he is as likely as not to drop the implement in horror. But after making these admissions, the anti-dogmatist must be reminded that his argumentative triumph is not so absolutely complete as it at first sight appears to be. As was pointed out in the chapter treating of Science, he has the undeniable appearance of arbitrariness in the Law of Effectiveness to settle with. If that Law is worked by a sanction which is not physical (a

point which we have yet to consider), it is clearly impossible for us to say what result a merely different appointment of validity in the co-ordinations effective within the compass of the senses we now have might give;—a different order in their effectiveness might so fit in with the executive-happenings as to omit many if not all of the present pains, and wholly put aside the need for laboriously-acquired Civilisation with its instrumental equipment of an external apparatus,—making it idle to ask for historic evidences either of that as existing in a primeval period, or for traces in man's physiological structure of other forfeited senses. This, of course, is mere idle hypothesising unless some corroboration of such supposed alteration of validity in the Law of Effectiveness is found in the facts of Conduct. But this is precisely what the religious men allege. It will, however, be better to follow up this matter in a separate section. One further remark, however, may be here prefaced. If it is impracticable for us to conceive of a prior state which would in any way lead us to prefer it at the cost of missing what has arisen in its place, that fact belongs to such hints of any explanation of the enigma as there may be found to offer.

13. *A Hypothetical Solution on the Assumption of Dogma.*

Let us then at this point try to frame a conception

of what would be a hypothetical solution of the problem of Evil if dogmatic information as to the several particulars grouped for the purposes of such solving warranted itself in some way so as to command belief in it. It may, perhaps, be sketched as follows :—

Supposing (and in the first framing of the hypothesis we need not check the imagination) it was affirmed that originally the human being at his coming forth into existence was gifted from a Supreme Source of things—acting in pursuance of its own spontaneity—with a large optional power of superadding to the system in which he stood, the condition of man's retaining this state being a right use—that is a prescriptively-limited use—of that ability; but that the race or some portion of it at some period misused this power, the necessary consequence being in their cases a forfeiture to a more-or-less large degree alike of it and of the state it gave,—the mode of retrieval appointed being a life thenceforward of mixed experience which should offer opportunities for mystical aspiration, right options in the critical occasions availing to obtain graciously-conceded bettering of structuralisation, giving a progressive amendment in the actualisation of the Ego; and that, although in this life—for the purpose of its being kept a state suited for disciplinary purposes—man could have no power of

operating upon the Executive System, excepting in the way of scientifically learning its laws, and volitionally causing them to interact specifically within their own limits and relations, yet his existence on terminating life in this world naturally renewed itself in others, where by an enlargement of reminiscence he would finally become aware that he had been lovingly led by a moral education, in which every item of suffering was needed for these correctional purposes, back to a right egoistic-state;—a corroboration of the likelihood of all this being given by a suggestion naturally arising to the effect that man's bearing of the ill-happening events in a way fitting in with these hypothecations, by inducing certain habits of Conduct, namely, growing readiness, self-adjustment, and trustful experimenting-aspiration towards growth, amounted to a favourable fostering of the efferent-activity, pointing apparently to a possible future wider use and range of it.

How far the system of Christian Dogma answers to or in any respects falls short of, or improves upon, such a hypothetically-framed solution, it is for theologians to show. And the plan of this treatise does not include Theology.

Of course, it is open to a controversialist to object altogether to the type of creature which is above assumed,—that is, to what was in an earlier place

explained to be meant by the term a moral being. He may say that it is to him unintelligible,—that, so far as he can comprehend it, it is impracticable in this present scheme of things,—and, finally, that if it were practicable, it seems to him undesirable. What answers could be offered to those objections? In urging them, it would be necessarily implied that the debater did not attach much value to the facts which are above mentioned as the grounds on which any presumption in favour of Dogma must rest. If he asks for any other evidence, what further proofs can be offered? Any such, if any there be, are private, affirmed to be attainable only in the secret realm of Conduct; and, in the nature of the case, the objector is without these. If he found himself in connection already with another higher system of things, in which a divine graciousness was operating, actually effecting an egoistic-retrieval, by means of Evil somehow turning itself to use, all the other arguments would be superfluous. But how is that to be made to tell upon the judgment of a person who knows nothing of it? It seems to be possible only to this faint extent,—that he must in his reasoning necessarily take note of the fact that there are great numbers of his fellows who aver that in their own case the problem of Evil has been in this very way made quite intelligible—has, in fact, been practically solved. It is open to

him to contend that they are subject to illusion, the explanation of the mode of the illusion being found in psychology, and resting on enthusiasm. The only further appeal which remains in the way of argument would be to a comparative judgment made in practically applying what we at the outset saw to be the principle of Virtue, viz., multiplication of social-consequences, and in that manner estimating which, according to this test, is the egoistic-actualisation highest in grade, when excesses attributable incidentally to historic periods and individual cases are rectified.

At this point we may stop, for that "rectification" would itself again be disputed on each side. The insurmountable controversial difficulty in the case, stating it shortly, is this,—that the anti-dogmatists preliminarily refuse to allow anything mystical to the Ego, and so will not hear of any hypothetical-enlargement of human experience beyond the limits of this life, while that is the very assumption on which the dogmatists rest their hope of a solution of the problem; and the dogmatists, on their side, affirm that the absence of formal demonstration, of which the others unyieldingly complain, is indispensably necessary to give the opportunity of egoistic-assertion on which all the higher phenomena arising in Conduct depend.

§ 14. Review of the Conclusions made out.

All that can finally be done is to point out some conclusions to which it seems likely both parties would assent.

The intellectual experience clearly finds its opportunities in the happenings of sensory catastrophe; and out of the slowness and the labour of the process of generalising, together with the bodily hardships alike of being without that knowledge and of practically giving effect to it, arise the occasions for the moral virtues. In both these ways, there is an accumulation of progressive attainment in social consciousness exhibited publicly by the best civilised communities, which if it does not already frame a perfect Emotion of Content with the situation, points to the likelihood of such a feeling completing itself in the future. Further, the less adjudicable, mixed fortune of the individual lot in the ordinary average cases of it, offers large satisfactions, as well as causes for repining. This life, in which we have to ask one another's pardon, and to give, with more-or-less of hurry, alternative forgiveness, to feel pity and receive sympathy, develops a human sweetness which, whenever Conduct shows much complexity, dearly commends itself. In the becoming reconciled mutually to the injurious, the opposing, the disliked, the dreaded,—these turning

into the admired, the trusted, the loved,—we find arise, in a way which is most practically real though intellectually inscrutable, possibilities of a glory of virtue, a glad multiplication and heightening of sentiency following on every such victory.

Finally, it is alleged by individuals not few in number in every generation of mankind, that on attaining a certain stage of Conduct, namely, that which has been more-or-less successfully reached in their own case, the whole difficulty of Evil is more perfectly solved in private than it has yet been on the public scale,—that is, they say it is for them completely overcome. They aver that they prove in their own consciousness that every pain endured in a certain manner suffers retrieval, rising by the interference of a helping graciousness, into a pleasure higher in grade; a bright enhancement of added consequence developing in each such mystical vanquishing of Evil. But this kind of proof, as we earlier said, is only fully valid for those who individually attain to it in their own experience, the express affirmation of those who say they have it being that it can only be got in the mystical mode, which the others are certain to deny until they use it.

It may be worth while to recall that in treating the topic only a passing allusion has been made to the old hypothesis of an Arranger of Nature having had to work in an intractable material, which in part

hampers His beneficent purposes. Mr. J. S. Mill's remarks on this alternative possibility recently gave to it a little vogue. But, exhaustively considered, such a supposition, we repeat, leaves the problem of Evil just where it found it: the two opposing forces would have to be integrated in a third to fulfil the scheme of a Cosmos. And that done, all the investigation returns upon you in the terms of the discussion as it is above taken.

How, then, does the inquiry finally stand? The ultimate conclusions arrived at may be stated thus:—

1st. It seems impossible, on a full survey of the world, to regard Evil as resulting accidentally, or in any way of what may be called defective function in the scheme of things, since it is not possible, at the last stage, to conceive of that occurring in any other mode than as being enforced arbitrarily.

2nd. In no case of Evil, beheld from the general standpoint of its consequences as they tell upon the whole race, is its occurrence left finally unvindicated in the sense of not pointing to its own abatement and cure.

3rd. In the very process of the abating and future preventing of Evil, wherever this takes anything like full effect, there develops an enhancement of experience which tends to frame an Emotion of Con-

tent with the past state of things that has led to it; this feeling being now already clearly recognisable in all the cases showing the public scale of affairs relating to civilised communities.

4th. There are grounds for supposing that there is a sentimental illusion as to the quantity of suffering in the lower grades of creatures; and it is further suggested that Modern Science has perfunctorily given exaggeration to the appearance of Evil in the scheme of Nature.

5th. The existence of Evil, as it occurs in the human lot, seems to fit in with the conception of man being a moral creature under correctional discipline; but, in order to give explication to that conception, there appears to be necessary, hypothetically, an enlargement both anteriorly and prospectively of the individual career. In other words, without the aid of Dogma, the problem of Evil is left insoluble in the ordinary personal experience, man having in any attempt to get light upon it to turn to the facts of Conduct, the solving or non-solving of the problem finally depending upon whether there is or is not disclosed in those happenings a supernatural interference.

Any one whose mind fully acquiesces in these views is not unlikely to see in the very haphazardness of disaster in this life, and the apparent carelessness

and excess of ruin occasionally shown in it, a finishing proof of the probability of another existence. The style of what is termed accident in the mundane system would rather suggest to such an one that the happening does not conclusively signify,—that it is a detail in a larger scale of affairs which has further rectifications in a wider period.

That remark seems to be the last word possible on the optimist side.

CHAPTER XIX:

METAPHYSICS.

§ 1. *How this Class of Final Questions Arises.*

IN all the matters inquired into in the previous chapters, a number of further questions—the collective name for which is Metaphysics—have had from time to time to be glanced at as arising in connection with human experience.

A special Philosophy, that of Positivism, now seeks to banish the detailed consideration of them from the thinking of adult persons, but it has in that scheme to be recognised that the questions are inevitable even now in the earlier stages of each individual human being, with a prospect of their long continuing to be so, while it has further to be admitted that, historically, they have had a paramount practical reality in the experience of the race. The chief Metaphysical problems are these:—

Is the apprehended objectivity of the world which we sensorially cognise real? What are Space and Time? Whence arises the necessary division of

Substance and Attribute? How is the belief in Causation got? Why do we expect continuance and uniformity in the Laws of Nature? What is the distinction between Matter and Mind?

It is easy at once to see that but for the fact of our direct immediate consciousness not being commensurate with the Executive System,—or, in other words, but for our intellectually inferring extent in that System beyond our sensory limits,—there would have been no opportunity for Metaphysics in some of these kinds. In reality, every one of the above questions is an attempt to get further cognitions, or enlargements of experience of some sort, on the basis of that Intellectual Inference which we saw in the chapter on the Intellect is ever abiding with us.

Positivists, like others, have to generalise working-rules for themselves adapted to expectations of result, which practically recognise a hidden operation beyond-and-between their sensory experiences. They, too, have to admit certain beginnings of a Metaphysic. The distinction betwixt them and older-fashioned thinkers is that the Positivists repudiate all attempts to get sentiency in respect of this necessity; affirming that to do so hinders the generalising of the working rules, thus keeping back practical amelioration, and further that the trying lends itself to certain bad forms of Emotion. But these points have already been dealt with.

§ 2. *The Law of Effectiveness the First Metaphysical Problem.*

If the above is the mode in which Metaphysics arise, it would seem to follow that the first problem of all is offered by the Law of Effectiveness delimitating our consciousness; that initial Law, which has so often had to be named in this inquiry, as being shown in the restrictions of our self-actualisations both in respect of their duration and numerical frequency, and, also, in the happening of specific kinds in our experience while we are egoistically actualised. What is the sanction enforcing that Law? The spiritualists have an answer. They affirm that the experience they get in Conduct of modifications of the egoistic-actualisation in other than the sensory realm gives them a persuasion that the sanction of the Law is the will of a Supreme Personal Ruler, who, on its foundation, allotted all the possibilities of the primary occasions out of which the phenomena of Conduct arise; the explanation of those phenomena being given in their system of Dogma,—such explanation including a reason for the egoistic-actualisation not having its range widened in the sensory realm itself during this life. But obviously a question which can only be answered in this large, complicated, ultimate way, had better not be made the starting point of metaphysical inquiry. Rather, it might be described as its goal.

Before turning to try a more practicable opening of the investigation, one further remark in connection with the above matter may, however, be added. In speaking earlier of the Law of Effectiveness, there was a convenience in insisting upon the way in which its working-restrictions, by delimitating our consciousness, gave the means of escape from Pain,—all impressions below its range, that is, impressions or organic-activities not massed sufficiently to fulfil its requirements, not appearing in sentiency at all. It must, however, be borne in mind that apart from this practicable management of Pain for suggested moral ends, a partial privation of experience is not needed for the purpose of delimitating what we have of consciousness: our sentiency displays a capability of simultaneous multiformity. The nervous co-ordinations which are effective in consciousness are valid within their own range, and, so far as anything answering to delimitation is essential, might be said to delimit one another. There does not appear to be suggested any reason of that kind why our consciousness might not be illimitably enlarged, and made unpausing.

In other words, the Law of Effectiveness in respect of the restricting of our actualising, etc., looked at generally, has, so far as can be made out, owing to the very fact of its restrictiveness, to be considered arbitrary,—a working-efficacy of specific organisa-

tion limitedly-effective obtaining in pursuance of its operation we do not know why, unless moral considerations are brought in to give the answer. For, as we saw very early in this inquiry, it is out of this fact of our consciousness not being commensurate with the Executive System, and its being diminishable in the sensory kinds, that the opportunity of Pain arises.

§ 3. *Space and Time.*

Postponing, then, that first question, we are next directly pointed to the two great conceptions of Space and Time, for they clearly refer themselves to limitations in our consciousness. By the sublimation of those two terms into their respective absolutes, Infinity and Eternity, we start hypotheses of full commensurateness with the Executive System. It is found to be as impossible for us, when trying to extend our sense-experience till it ceases to be incommensurate, not to conceive of the universe as existing infinitely and eternally, as it is for us not to be aware that we ourselves, practically proved to be egoistically lacking in commensurateness with the universe, exist in the limitations named Time and Space. But, as we have several times repeated, no sooner do we try to apply the notions of Infinity and Eternity to the explication of our limitations than stultification arises. Those absolutes are not thinkable as operating any-

thing; in fact, they scarcely can be said to bring in any new idea at all,—and a wholly new one is needed for the explication of executive-procedure. The phrase Executive System is our description to ourselves, in such intellectual-sensory language as at the first stage is alone available, of the universe subsisting, operating, carrying on its existence in our practical apprehension of it. But in Chap. I. we mentioned that we are able to apprehend at a last stage of thinking that its doing this cannot be in any mode of Space and Time. Those conceptions are found to be just as impracticable operatively as their extensions Infinity and Eternity. A final apprehension, or inference, tells us that something we name Force, in its subsistence and in the effectuating of itself with the results which we for our own purposes name Motion, ignores and nullifies Space and Time. Let us defer for a moment the question how we get any such dim awareness as we have of this more ultimate mode,—it will have to be reverted to again directly.

One of the greatest feats achieved by modern philosophical analysis, in the hands notably of Mr. Spencer and Professor Bain, is the giving the genesis of what may be called the mixed sensory-embodiment of the apprehensions of Space and Time,—that is, the conditioning of the feelings accompanying them. These latter are experiences specific in their own kinds,

but in-and-along with every instance of such feeling there is an intellectual-inference of practical consequence for us, under the existing limitations of our sentiency, carrying in it a suggestion of Space and Time as being experiences due to those limitations—as, in fact, arising out of them. Enlargement of our executive-range would in so far as it reached mean nullification of the experiences of Space and Time.

The puzzle as to whether Space is infinite is a triviality; infinitude practically stands for the absence of the limitations which cause us to conceive Space, and it may be assumed that it would itself convert in our apprehension ere it was realised by us. Neither Time nor Space has any meaning excepting in respect of our experience of something else; and to try to consider them as existences independent and self-sufficient is always hopeless. In a word, Time and Space, regarded as intellectual terms, are the names of our cognitions of the practical relations of ourselves to things, which in-and-for our experience, that which we name Force establishes dynamically (Time) and statically (Space) in the Executive System, though we only become aware of the one of these two by means of the other; regarded as emotional-terms they are the names of the feelings which we have along with the specific sensory-experiences arising when we recognise the practical relations. We are thus finally remitted in respect of them to a more ultimate

sentency,—namely, that which, however it arises, enables us to transcend them in some way, hinting that Motion is a paradox.

To this fundamental sentency, lying somewhere at the root of the actualisation of the Ego, which has the ambition to intermeddle with an Absolute, and even seems to believe in some acquaintance with it, we find ourselves always finally referred in every one of these metaphysical questions. Take next the problem of Substance and Attribute.

§ 4. The Distinction of Substance and Attribute.

In an earlier place, it was pointed out that the division of primary and secondary qualities of Matter, which concedes a superiority of reality to the former, is based on the fact of the single unassociated-sensations, that are classified as the secondary qualities, carrying no practical consequences, having no executive-power. In every apprehension of what are called primary qualities it will be found that two senses at least must be acting in a way of association which involves happening of executive-procedure, and which by a proved practicability of the order of the grouping being modifiable gives an occasion for intellectual inference, on grounds of past experience, as to the operative course of executive-causation. The word Substance, in fact, stands for an intellectual-apprehension representing the causal-capability of the

generalisation of the non-ego we call Matter,—its power of operating apart from our consciousness, and of surviving between changes in the sensory-modes and after them. In treating of the Intellect it was explained that we find it possible, when repetition enables verification, to calculate changes in the *order* of the occasions for sensory-experience according to laws of causality disclosed as operating irrespectively of our egoistic-actualisation—that is, they operate just the same during periods of non-awareness on our part. Substance is, consequently, our name for the Cosmical Energy effectuating itself in this way of independence of the sensations being at the time had or not had, and determining by the inter-actions of its own causality the changes in the order of the sensations upon our again having sensation. We ventured earlier to point out that Mr. Mill, in his definition of Matter, omitted this executive-capacity; it being open for any anti-materialist disputant to say that his fine phrase “permanent possibilities of sensation” was rather a definition of Mind than Matter. But in what just precedes, causality has had to be spoken of.

§ 5. *The Question of Causation.*

In now going to the notion of Causation, we at once see that it is of necessity mixed up with that of Substance. It is by means of it that we attempt to explicate the notion of Substance: the two appre-

hensions are two correlatives, the one gives the other. None of the sensory modes of consciousness has any power of explaining the occurrence of its own occasions. They are, if we may clumsily so put it, all statical in their reference, with one vague, faint, dim exception. Hume, and all who have followed him, will have it that we have no dynamical apprehension at all. The most modern philosophising, however, by the prominence it gives to the Muscular Sensation seems at first sight to tend to qualify that position a little more than some thinkers appear to be aware. It is quite true that we are without any cognition or experience of that which we call Energy in the act of transforming in external Nature its executive-process. There is a dark moment of passage *between* physical results which is to us blank in any sensory mode. The objection of Hume might almost be said really to be that we had not another sense added, enabling us to apprehend that for which we have somehow to coin a word, Force or Energy, and so to follow it in its operative-process.

The question suggested by the more modern thinking is, whether or not in connection with the formulating of a Muscular Sensation, we have, though not the consciousness asked for, a hint of something in a way partly substituting it; a representative sentiency, which saves us from the blank

intelligibility which is affirmed, even though the experience be only of the vaguest, the faintest? It has been stated more than once in what has gone before, that we are only certified of any physical executive-efficiency in connection with volition by an intellectual-inference got from the order of the experience in the peripherally-connecting senses being modified. But what arises in volition itself gives a particular feeling added to the other specific sensations; an experience which has to be taken into account in some way, and for which, indeed, the later physiological-psychology has brought into use this new name of the Muscular Sensation. But the question needs examining with a little more particularity.

In the statement that man knows nothing of Causation, it obviously could not ever really be meant that he was quite without any kind of consciousness in the case. A further term was necessarily brought into use, viz., Causation, which if it had to repudiate all connection with sensory-experience, at least possessed significance for the intellect. We know in some way—whatever the manner—that there occurs cessation of executive-operation in one mode and beginning of it in another,—in so many words, that transformation of phenomena takes place; this we apprehend as truly as we do the sensory-phenomena themselves,

and it is experience additional to those phenomena. We take account of a working-power practically, being able to calculate its operating by assigning a part of our experience representatively for it. This intellectual awareness in respect of Causation includes two items,—the conviction that its process implies the cessation of phenomena in some prior kinds in quantity exactly equal to the new ones which arise, and that the mode of its operation somehow transcends Space and Time, since any attempt to apply these notions to the working-conception of Motion, proves stultificatory. To go further and ask for a cognition of the mode in which vicissitude in our sensory experience is worked, is really to require, first, insight into the efficacy of the Law of Effectiveness; and, second, acquaintance with that primary process of the inter-quantification (really qualification) of the Cosmos which we have sought to describe by the term Executive System,—it seeming to be the essential manner of the Cosmos to subsist in a way of spontaneity which we call operating. Causation, then, can be distinguished, provisionally at least, into two aspects: 1st, the operative subsistence of the Cosmos which is continually in its own primary mode of spontaneity effectuating what we term its inter-qualification; 2nd, the events of sensory consciousness arising in an order of fixed vicissitude related to that inter-qualifying,—that is,

the omission of consciousness in some of the sensory kinds during certain periods of the Cosmos's self-operation : the occurring and non-occurring of sensation, taking both together, suggesting a Law of Effectiveness,—the phrase, in fact, standing for the enforcement of that demarcation of sensory consciousness and unconsciousness.

This more specific particularisation enables us better to understand what is the experience we should have if Causation was open to us in the way some thinkers have appeared to require ; we should know the essential mode of existence of the Cosmos, including, besides its total inter-qualification, the very effectuating of the Law limiting our sensory consciousness. It thus appears that what is really the issue of the argument here is this,—that the want of a knowledge of the mode of Causation, which in some systems of philosophy is made to point such a wholesale reproach against the system of things in which man stands, really means that man is not commensurate with the universe, but is limited. To insist, after this is seen clearly, upon knowing the very process of Causation begins to take on an air of inordinateness : would it be modestly satisfying to our reason if the fact of the operation was made only rudimentarily intelligible to us in a way of hint and substitutory representation ?

With a view to seeing whether there is anything of

this, let us go back and ask, have we any experience answering to a dynamical-apprehension, since that might be accepted as a kind of faint representation of the primary spontaneity of the general Causation? To what extent does the Muscular Sensation, which did not much enter into Hume's reckoning, explicate Causation? Well, the fact is, that if by a last effort of analysis we try to distinguish between the Muscular Sensation and the volitional feeling, the Muscular Sensation only very imperfectly gives us help of the kind we want; it is to something happening in the egoistic-actualisation already subsisting, and to an experience which seems to run before the Muscular Sensation, not to follow it, that we are finally referred. Is there afforded there any intelligibility? At once this may be said, that within the primary self-experience of the Ego Causation is fully intelligible as a fact,—that is, in everything except its operating mode. So far from the surmise of a modification of effects or even a multiplication of them shocking us egoistically, bare *potentiality* is the conception of all others most native to man. It comes quite naturally to him, either in a way of survival or of anticipation: he is, when volition is challenged, never able to shake it off. As was earlier mentioned, the suggestion which naturally arises in considering this fact would seem to be that man himself once had a

permitted creative faculty, but that it has dwindled. Comte's three Laws recognise that each human being now,—as well as every one in the preceding generations of the race,—during a certain stage of experience, firmly believes that he has causative power though it is limited. So aptly does the idea come to him, that man, in what Comte names the theological stage, lavishly ascribes the same power to everything in the world: in fact, it is only in that way he supposes that he himself is limited, and is reduced to the obligation of propitiating the other more-or-less powerful beings adverse to him. In that stage, man sees everywhere potentiality, able to alter effects, and to vary the total sum of being.

But by-and-by, man learns, in a slow laborious fashion, that these forces have only a fixed operation,—that, in reality, they only act in set unalterable ways; and that not only can they be circumvented or avoided, but, better still, that they can be made to act one upon another and so be turned into servants of himself. Then, he frames notions of laws, in place of deities; thus finding himself in a second stage, that is, the metaphysical one; but it has to be noted that in it the old intelligibility of Causation has obscured. But, again, as scientific knowledge advances, that conception of Law adds to itself the great generali-

sation that the sum of physical phenomena is ever the same, there being for every evolution quantitative cessation in prior modes, the progress showing transformation only. Law is then affirmed to be merely a generalisation of mode, not a prescribed rule with enforcement of it; man finds that he need attend only to the learning of these generalisations and the ways of availing himself of them. This is the third, the positive stage. Here Causation further eclipses: the mere fact of it cannot be ignored, but the process is pronounced utterly mysterious, hopelessly inexplicable. It is alleged, however, that this does not practically signify, since, owing to the operated results being uniform, we can proceed just as if we cognised the mode of cosmical interquantifying and of vicissitude in our sensations. The question the modern philosophy has formally raised is,—Why not rest in this stage?

It remains to be seen whether man can do so. Everybody admits that it would be a narrowing of our first hopes of experience; and even an elimination of what was long supposed a real kind in it. If Hume had only discovered a faculty of further sensible apprehension answering to the operating of Energy, instead of demonstrating that we were without its experience,—man in that way getting a cognition tracking the causative-process in the moment of the disappearance of the sensory-modes

we now know, that is, one accompanying Force in the act of transformation,—no metaphysical inquirers would have been left. But no such closing of the door admitting Metaphysics took place. Hume's philosophical school proclaims aloud, and it is its distinguishing use to do so, that there is between cause and effect, between antecedent and consequent, this blank in sensory experience. Leave it, they say; refrain from trying to make anything of it, for you cannot succeed. Can it ultimately so be left? We gave some reasons in an earlier chapter for the surmise that so soon as scientific knowledge improves upon its present meagreness and is amplified sufficiently to enable our intellectual-apprehensions to follow the operations of Nature to a degree of complication and intricacy answering to our own ordinary apparent spontaneity, we must, so far as we can reason the point out, then by the constitution of the human mind ascribe to Nature the like character of being a person which we assume to ourselves, and suppose in our fellows. It is not possible to think that the idea of Law will save man from doing this, for that idea belongs to the rejected second stage. The conception of Law has really been given up; in the new philosophy we are confronted with Force acting in fixed modes. But in our own case, activity, even though Science teaches that it is only mimetic, not real, gives the ex-

perience of personality. If that be imperative, there can be but a temporary leaving alone of the problem in the sense of abiding in Positivism: the scientists will not be able in the end to escape a superstition of physical pantheism. In that case, Comte's programme of the three stages of human experience will be seen to be defective; a fourth historical period will develop,—that of the attributing personality to the Cosmical Force by mere analogical association of ideas. The real psychological question would then be,—how it was that man could frame the notion of Law? though, as we have mentioned, that conception was in its very terms inadequate, defective, non-self-explicatory, and has, in fact, proved temporary. But let us go back to the point in hand.

The two alternatives were stated in an earlier chapter. Either physical pantheism would seem to be inevitable, or else the progress of scientific informing must somehow gradually decompose our own apprehension of being *persons*; that is, we must refer the actualising of the Ego in some minute way of a conditioning physical-succession, answering to the dynamical flux of Energy. It is really this which a certain line of philosophy is now attempting; a specific ratiocinative effort is directed to doing away with our own self-cognisance; aiming at convicting the Ego of being an illusion attributable to ignorance, somehow arising, though there really

was nobody to err. Man, for the word has under protest to be used, is to find out this antique mistake of personality, and by increase of Science progressively to know this illusive self into nonentity.

The final issue deciding all Metaphysics, it will now be seen, is, whether or not man's own self-consciousness yields to this decomposing analysis of Physical Science, which believes that it has ascertained that there is only transformation of Energy with non-multiplication of effects quantitatively? That there is a line of reasoning suggesting human consciousness itself to be an exception, on the ground of its being ceaseable and strictly occasional, and, therefore, witnessing to multiplication in some way, has been pointed out earlier. But it will be better here to follow the investigation more generally along the line above started. If the Ego refuses to be ignored, the proper course in this inquiry obviously must be that which is attempted above, to refer to it, —to see whether it by its primary mode throws any light on this subject of Causation.

In the first place, let us summarise the history of the case. Science has undoubtedly made out that the earliest supposition of mankind, that ~~there~~ is everywhere around us arbitrary multiplication of executive-effects, is a mistake. The belief that individual sensory objects had separate personality is, also, proved to have been an illusion, for we now

apprehend that there is no such independence of activity in objects ; and if, as is above propounded, we at a certain stage must revert to ascribing personality to Nature, it will not be the attributing a multiplicity of personalities as in the first stage, but an unified one, which in-and-through objects, as we sensorially demarcate them, largely acts in fixed methods. We say largely so acts, for the final proof of the Cosmos being a Personality absolutely intelligible to the human Ego would have to be furnished by the fact of there being multiplication of executive-effects at *some* part of the system of being ; enabling man to believe that the agreeing, co-operative non-multiplication where it occurs is equally referable to that which he calls Will ; in other words, that it bases on a hypothetical potentiality of alternativity shown in some one or other part of the system. It is this latter proof which Science is at present discrediting, or rather a philosophy which some scientists add to Science, putting forward her triumphant demonstration that in Nature external to man's apparatus, there is no quantitative multiplication of effects as showing that there is not any such multiplication within it. That case (reserving always, as above mentioned, the occurring\$ and ceasings of human consciousness itself) is, indeed, made out, if there be no inner realm of Conduct, but one circumstance still remains unexplained away, the one we have now in hand ; namely,

that man, so long as his persuasion of personality lasts, must wonder whence that persuasion comes, and how ever this mistaken conception of Causation arose.

It, in some way, originated within himself, being indeed a projection of himself exaggeratedly over the whole world, according to his original manner of self-apprehension. The action of his reason does not wholly stultify itself in recognising this huge mistake so clearly proved by Science if his earlier belief can be regarded only as exaggeration ; since, if man has left to him a trifle of experience in which, call it Conscience, or whatever else you may, he apprehends, or seems to himself to do so, multiplication of executive-effects, the logical possibility occurs that Science has not excluded Causation from man's contemplation, but has only ascertained uniformity and fixed quantity in its operation externally to man's structure. The idea, then, suggests itself, as we have seen, that the explanation of the case may be,—that man's feeling of personality refers itself to a mystical-efficacy which is mimetic of Causation, taking effect in a realm where he finds himself practically limited by another Greater Personality, who establishes relations with him—by graciously making the mystical-efficacy when and as He pleases become actual executively,—a certain multiplication of persistable effects so arising vindicating personality both in Himself and in man.

This is what is affirmed in the system of the Christian dogmatics, and it is open to any apologist for the beliefs to say, first, that the puzzling illusion arising in connection with every volition, *i.e.*, the persuasion that we are ourselves the cause of the movement, is a capital fact among his proofs, as witnessing to a prior state when man had a permissive causative power; and, secondly, that the demonstration by Science of man's present physical-ineffectiveness was, in fact, needed to establish the theological doctrines of the Fall and of Grace.

The general conclusion which seems to be pointed to by this line of argumentation is this, that such partial intelligibility as we can find in the notion of Causation derives from the most ultimate egoistic-apprehension of all which offers something which is representative of Causation,—that, namely, of a potentiality mimetic if not real, somehow supplying itself in our private self-recognition as being ourself a person, though the efficacy with us is only mystical, not physically actual; the circumstance that everything short of the conception of absolute potentiality—that is, everything short of assuming personality—proves paradoxical, alike in the case of our own volition and in respect of the executive-operation without us, being a natural presumption in support of the notion. Under this view, the blank in our sensory experience which so baffles Science,

making Causation an enigma to it, seems to turn out to be the very opportunity for spiritual sentiency,—requiring for the completing of man's consciousness the apprehension of a Supreme Personality having all power; while there are many men who affirm that they do so fill up the blank which Science leaves,—finding in the mystical phenomena of their own Conscience a private rudimentary hint of the ultimate mode of Causation. The conclusion may be set forth in three particulars thus:—

First, Man has a private, and irreducible, feeling of executive-efficacy, which gives him the conception of spontaneity and makes it secretly intelligible to him as a fact.

Second, The circumstance that the mode of Causation is to us mysterious,—in other words, that Energy in itself is hidden, there being a break and lapse in our sensible-experience between phenomena,—lends itself to the conception of a Cosmic Potentiality, with a formal possibility of its effectuating results arbitrarily in operating the transformation of phenomena.

Third, That Science—having ascertained that, while there is in the process of Causation this suggestion of a formal possibility of arbitrariness, yet as, matter of fact, Nature in her executive-operations shows quantitative fixedness amidst all the vicissitudes of kind in our apprehension of phenomena—only carries

her demonstration to the extent of proving uniformity and continuity in the physical realm; leaving man's egoistic-consciousness and the Law of Effectiveness operating in his sensory-experience unexplicated, these facts suggesting a potentiality somehow existing which is quantitatively variable, even when acting repetitively, and in so far by rule, so remitting Causation back to the Ego for any hint of intelligibility.

The reasoning altogether depends upon whether or not it be true that there are two facts which the scientific analysis does not touch, namely (1) the self-apprehension of personality in man, with the related persuasion at the moment of volition that man is himself executively a cause; and (2) whether in the realm of Conduct the scientifically-demonstrated illusoriness of that last belief, in so far as physical efficacy is concerned, is or is not rectified, and again made veritable, by its being seen that man's causative power is mystical in its mode, but that a Supreme Personality gives executive-actualisation in a way of grace?

§ 6. Is there Objective Reality?

This question, which, in one way and another, sums up all the rest, does not bulk so largely in philosophising now as it did formerly, though it necessarily still underlies all the speculation. It is not only that criticism has shown that, when put in its

coarsest way, it implies a demand for another sense to verify those we have, which would itself need another to vouch for it; but such questions as whether colour, heat, sweetness, etc., are *in* the object have recently become antiquated from Science teaching that for the experience there is needed a certain "conditioning,"—an organisation specific in kind, and an executive-operation in a cosmic mode related to it. All the sensory-experience is, as we earlier saw, made out to be merely occasional, wholly added for the time to the sum-total of being, and ceasing with our actualisation specifically to that effect; having no executive-power, and leaving no permanent consequences. It will be observed that the inquiry has now come back to the point named above, and then postponed,—namely, to what quarter this occasional multiplication of being has to be referred; whether the Executive System at those points of it develops a creative function, or if our intellectual cognitions of that System, when made what seems to us exhaustive in their apprehending, show that supposition to be stultificatory, leaving us with the suggestion of another causative-order, the potentialities of which take actual effect then? • This is the ultimate question to be considered separately in the chapter following this one.

But the query as to objectivity, while seeming to abate, has really enlarged itself, and can now

only be acceptably framed in this way,—Is an intellectual-inference obligatory to the purport that the Executive Process, which at certain stages, under a Law of Effectiveness, gives occasions for sensory-phenomena in our experience, goes on independently of our consciousness? It has been sufficiently shown that modern Science gives us an enormously enlarged apprehension of an Executive System extending beyond our unartificially-aided sensory cognisance, and operating irrespective of our attending to it, or having current knowledge of it. Independency is, consequently, established, and that, in the modern meaning of the term, is objectivity.

But practically, this question of objectivity runs on into that of the criterion of Truth. Followed out to the end, that inquiry is always found to mean the non-occurrence of disappointment when belief is tested by efferent-activity being put forth in accordance with such belief. In addition to what was briefly offered as to Logic in the chapter on "The Intellect," two or three further details here suggest themselves:—

A self-evident truth, such as those relating to mathematics, etc., means a neurotic-diagram which has no secondary developement; one so primary that it always recurs with identical reinstatement, without casual cues prompting it to vary. Proof is only needed, and is, in fact, only possible, when the neurotic-diagram, after having been decomposed

by the efferent-cues developing further sensory experience, can be reinstated by a backward tracking of the efferent-activity, or the substituting of this which is given by repetition and is called verification. That, in fact, is proof. The function of the syllogism, taken at its barest, is by means of impressions aroused reminiscently in distinct sense-organs, to start diagrams relating to different instances, and practically to find out whether they will use the like efferent-activity during the interchange of the order in their positions. If they will do this, then we have the fore-knowledge and safety of result which we summarily describe as Truth. In other words, we are guarded against subjective expectation being falsified by objective happenings.

§ 7. The Expectation of Uniformity in Natural Operation.

The expectation which man undoubtedly has of uniformity in the operation of natural forces has by some thinkers been made a great mystery. Much of the difficulty seems to be turned aside when we recognise it as simply being the expectation of repetition. Why should not we expect repetition, when we have reminiscence of the occurrence, and are without any reminiscence of the contrary, and, further, have promptings of the efferent-activities in reassurance of the affirmative reminiscence? An

idea—that is, a neurotic-diagram—must have its own value in the conditioning of consciousness specifically so long as it is undecomposed by another diagram suggesting the contrary. It was shown, also, in an earlier place, that there seems to be actual substitutive use of parts of neurotic-diagrams. There is not much mystery in our expecting that fire will burn in China because we have seen it burn here, since burning is part of the notion we have of fire, and must be present if we have the notion at all; and we can only realise the idea of fire in connection with thoughts of China by using reminiscently some of the very nerve-groupings originally acting here in having the actual sensation.

§ 8. *Matter and Mind.*

It was above hinted that the question of whether there is a diversity of causative-order is the final problem of the inquiry,—the answer to it determining whether or not there is any Metaphysic. How, if there is not, physics ever came to dream that there was is somewhat puzzling, but the question is admitted on both sides to have in it a difficulty. An attempt which has the authority of very weighty names—notably those of Professor Bain and Mr. Lewes—has recently been made to apply a solution which aims at getting over the need of Metaphysic by enlarging the notion of physics. Are not Matter

and Mind, it is asked, two sides of the singly-subsisting Entity?

It is a hypothesis not to be put aside lightly. At the bottom of it there is a frank recognition of a difficulty to be solved, and it tries to overcome it by versatility of thinking, in which lies all the hope we have. If in the preceding pages the theory is not accepted, at least not in the form in which those thinkers frame it, this was not for want of interest in it, since it was carefully considered. But the reader who has followed up the perusal of the inquiry to this point does not need telling that the main conclusions reached in the course of it are adverse to that solution. The Law of Effectiveness, reverted to so often in the course of previous chapters as governing the occurrences of the egoistic-actualisation and determining the kinds and quantities of the sensory-experience, seems to stand blankly in its way. It does so by bringing in *limitations* which make Mind strikingly incommensurate with Matter, physics appearing to be quite incapable of giving a hint of the genesis of that Law of Effectiveness; unless we attribute to them something not originally meant to be included in the term. In other words, the question arises whether the mental phenomena do not seem to include a suggestion of themselves being differently determined?

The evidence which appears to offer in support

of that view requires stating in full, and an attempt to do this is made in the next chapter. The search as to whether or not there is a Metaphysic that has to be taken into account continuously in connection with our experience, is, in fact, there resumed and concluded.

CHAPTER XX.

IS THERE EVIDENCE OF ENTITY OTHER THAN MATTER?

§ I. *Preliminary Historical Summary.*

IF we pass over the merely infantile stage, as to which adults are unable to speak authoritatively, the first persuasion given by what may be called the primary logic of our experience is, that all which we sensorially apprehend exists externally to ourselves, and is numerically distinct from us. We classify existence in such a way that we believe there is ourself, and that there are external things. So far as can be made out, the things are at first accepted as being individuals, each one being regarded as self-subsistent, and, indeed, having personal attributes ascribed to it. But, on a certain early stage of reflection being reached, the sensory objects begin to be no longer regarded as self-explicative, as fully disclosive, as independently subsisting. The intellect goes on offering its inferences. The idea of Substance frames itself, and the "objects" are referred to an Entity which is inferentially-cognised as larger than the objects

themselves,—namely, the Entity of Matter,—they themselves being intellectually apprehended as its phenomena. The very same process subsequently occurs in respect of our consciousness itself. By a further developement of intellect, we come to regard parts at least of our sentiency,—the emotions, etc., which necessarily go along with the sensory-experiences,—as phenomenal; a second Entity being suggested antithetical to that of Matter,—to which is given the name Mind. These early deliverances of the intellect, however, have to be subjected still later to its own further developing criticism.

Difficulties soon suggest themselves. Inadequacy is perceived in this hypothesis of two antithetical Entities. How, for instance, are they brought into practical relationship,—by what means is the simultaneousness of their operations effectuated? The higher philosophy wholly tasks itself, fundamentally, in attempting to solve this problem, or else to put it aside by framing a simpler conception. For at a later period it is asked, whether there is any need for assuming two Entities, or, indeed, if we may not simply accept the current facts of sensory-consciousness, with the apprehending of the working-rules they disclose, and refrain altogether from anterior reference to Entity?

Strictly regarded, it is simply a question of the limits of the intellectual activity. If the mental

experience, in reaching that last specified stage, finally exhausted its own process, by a verified functional-culmination, and there naturally arrested in a fixed persuasion, being thenceforward contented with the notion of there not being anything for it to inquire into further, then all would be said;—excepting, if remembrance of the prior mental state survived, the trying after an explanation of how it was that we had not rested there before. In fact, the task we really have now in hand is to try and see what conclusion in this case is accompanied by evidence, that, in it, the mental experience has carried its own process furthest, and whether it has done so to the ultimate stage which is conceivable as possible. The proofs demonstrating this would, also, show that the hypotheses rejected, or passed over, were miscarriages,—fallings-short of the thinking activity.

§ 2. Modern Philosophy and the Notion of Entity.

Without attempting to trace in detail the recent history of Psychology in Europe, it may be safely affirmed, that *the special characteristic of it is an attempt to minimise mental activity in the direction of taking into account the notion of Entity.* The view, as we pointed out in the last chapter, is sought to be established, that the old distinction of our experience which seemed to point to two Entities, may be recognised as merely formal; *existence* being looked on as

having, so to put it, two sides, the mental and the physical, sentiency bifurcating into objective and subjective. In so far as it is found impossible to think much about our experience without its taking on more-or-less of a phenomenal aspect,—the shadow of Entity in so far seeming to project itself,—it is endeavoured to restrict the assumption to a single Entity, in place of two. Modern philosophising has, indeed, shown some efforts at abnegation of thinking to the extent of leaving out wholly this part of the logical process; but, all that it has really achieved is the reduction of the inferences of Entity from two to one, with a certain obscuration of that one in a way which we will try to state directly.

It does not need very close looking into the subject to see that modern scientists, however strictly they confine themselves to inquiring only as to the modes of the happening of our experience, fundamentally concede throughout, by logical implication, the fact of an ever-accompanying inference—no matter how vague it is kept—of there being *something* working in those modes, and really conditioning the experience from outside those prescribed limits of inquiry: what we speak of as Physical Science has, in fact, really widened the logical obligation to infer Entity.

But before pursuing that point, a word more is needed to be said preliminarily. If it be asked

which Entity it is that modern philosophy has given up, it would not be a correct answer either to say it is that of Mind, or to say it is that of Matter; for the truth is, as will have been already gathered, that this philosophy is attempting to frame a substitutive single conception which will answer the purposes of both the old ones. It was mentioned in Chap. I., that in the new terms Force and Energy an endeavour is made to convey something more than the older word Matter signified. But, after making that qualification, this, at least, may be added, that the new philosophy does not—except in a largely qualified sense, which will be pointed out directly—direct its activity towards what used to be called the Idealistic side,—its bias goes the other way. If the old phraseology had to be retained, we should, in trying to describe what is now aimed at, have to speak of mind as being deducible from matter, not matter from mind. The very affirming of an inability on our part to apprehend Entity, though we are constrained to admit the fact of its existence as being somehow necessarily inferred, implies that the Entity is not identical with our consciousness. Further, as hinted above, it is clear that the wonderful advance of Physical Science unceasingly going on has a natural tendency, by the very multiplication of the working-rules progressively discovered as operating, to make more apparent this outward direction of man's regard-

The nearest approach to describing the inference of Entity as these scientific inquiries shape it, is that of an executive-activity capable of operating its own process irrespective of our consciousness;—to that is appended the hypothesis, that this executive-activity at a certain stage, namely, when it gives the organisation which we afterwards sensorily apprehend as a human body, develops, when that organisation acts specifically, our consciousness in the different modes it shows, sensorial, intellectual, etc., those modes being physically conditioned. To this latter question we shall return later; at present we are only dealing with the other, the first point, that relating to the inference of Entity. This inference of an executive-activity is in modern times ever-increasingly adumbrating itself in-and-by the progress of Physical Science; our imagination being incessantly brought into play, and giving more-and-more habitually an expectation of further phenomenal variations disclosing themselves in chemical and other ways under man's manipulation. The prevailing philosophy, however,—and this is the point we want to specify,—while constrained to this enlargement of the inference of *an* Entity existing, which it seeks to strip of the old antithetical character by rechristening it Force or Energy, instead of Matter, has striven all the harder to turn away contemplation from the Entity itself,—insisting that nothing can be

gained from attempting the apprehension of Entity, which endeavour it, in fact, stigmatises as the capital mistake of the old thinkers. In a word, the value of modern psychology consists in its being a set attempt to establish a hypothecated imbecility (borrowing the latter word from Sir William Hamilton) in the case of our intellectual faculty, and to fix the strict limits of it.

Let it be noted, that the inquiry immediately in hand does not conflict with the modern psychology on this general ground; we are not here considering the question of whether or not it is possible to apprehend Entity as such, but only whether the fact of Entity existing has to be inferred, and if the full mental process gives or does not give the inference of there being Entity with diversity of Causative-order? Clearly the psychology might be in error on that latter point, no matter how right it was in stating that we can know nothing of Entity itself.

§ 3. Certain Suggestive Complexities of Consciousness.

In order to make the inquiry exhaustive, it will be as well, first of all, to glance at the reasons preventing the modern philosophy from being able to gratify its evident wish to dispense with the inference of Entity altogether. It might be said that in the absence of such inference, there hardly would be any philosophy; but that would be a very summary closing of the question. The fact that in all this

inquiry man is but dealing with his own mind, and that the only aim is to get its fullest process, as it discloses experience in the act of our having it, had better come to light in its most gradual way.

If it had been possible for us, without possessing executive-power ourselves, to have the division into subjective and objective as the only complexity of our experience, the suggestion of a bifurcation of consciousness to that effect would seem to enable us to rest in that classification of the facts. No occasion might then have offered for speculation. But this division is not the only complication which our experience presents. Besides this persuasion of objectivity,—though, indeed, they subserve it,—we have the primary beliefs summed up in the word Memory, amounting, in the very first accumulation of experience, to a special duplicity of consciousness, that of retrospection; giving apprehensions of Time and Space,—that is, convictions of pastness and other-whereness. This is a further great complication of consciousness. Is it possible, however, to affirm that here, too, we have only self-diversification of current experience?

But we have not yet reached the limits of complexity,—other difficulties asking solution immediately arise.

Everybody feels bound to believe that his own awareness is intermittent,—that he undergoes noncon-

tinuity of consciousness. He has a special experience of it fading, and of it recurring with a feeling of resumption: Language gives, perhaps, a verbal possibility of theoretically assuming that, just as we may hypothecate objectivity in part of our experience as being only the correlative of subjectivity, and may go on to suppose that Memory is only a further self-diversification of our consciousness, so also this suggested discontinuity of experience is but a part of its essential mode. Words may be put together in some such way as this, but belief begins to refuse to follow them. It, indeed, quickly commences to form on the alternative basis, when we add that our experience only becomes intelligible in its order and in its quantitative relations by reckonings made on the assumption of certain executive-occasions of possible sensation having passed outside our consciousness and irrespectively of it, in the supposed intervals of our non-actualisation; and, further, that similar computations of what we may term executive-operation taking place in excess of our observation have to be made even while we are egoistically-actualised, owing to certain verifiable limitations in our faculty and in our range of attention; the very events of our own lapsings and recurrings being fixable in the calculable order of the executive-procedure so reckoned. Moreover, whether or not it be a strictly philosophical argument at this

stage, the fellow human beings whom the primary beliefs of consciousness credit us with having around us assert that they actually observe some of these occasions which are so missed by us. Not only do we find—speaking in popular phrase—that the clock moves its finger on the dial without our watching it, and that the fire has burned in the grate while we were out of the room, but we are told by others that they have observed the processes going forward from stage-to-stage.

In these ways, the reference to Entity, with more-or-less of explicitness of recognition of it, is reframed scientifically,—that is, it is found impracticable, after critical inquiry made, to limit our notion of existence to the instant experience of consciousness on our part as if it included all that is. We have to concede Being to something besides ourself and larger than ourself. Even if we try to minimise the concession by, at first, only allowing that the *order* of our experience is in some way independent of consciousness, the process determining it not being included in the egoistic-awareness, the logical distinction is, at bottom, fully granted; for the conception of an organisation,—a constitution which determines faculty,—conditioning what shall happen to the Ego, makes the Ego in so far phenomenal. But, finally, as previously hinted, we have to take into account a belief, which, although it has to be regarded as having

been enormously increased of late in Christendom by modern scientific progress, always exists wherever man is, whether barbarian or civilised, namely, the belief in the possibility of practically affecting the executive-order of experience by a manipulation of it. The inference of Entity is completed and finished when there is expectation of variable disclosure of previously undeveloped potentiality in the executive-operation which governs what sensorially happens to us.

§ 4. How Scientific Realism differs from the old Type of Realism.

But here we have to bring in the qualification of Realism spoken of earlier. Though it is quite true that the present philosophy, under the natural influence of advancing Physical Science, grows less-and-less Idealistic in the old meaning of that term, it would now be more inaccurate than ever before to describe it as Realistic in the historic signification of the word. It is a settled conclusion to-day, that the sensory-experience, in so far as it can be regarded apart from the operative-activity which executively gives the occasions for it, is not objective. Sound, colour, smell, etc., are not supposed to have any existence save for the Ego experiencing them. It is true, that it only has the sensations at specific stages of the intellectually-apprehended executive-operation, namely, when certain vibrations—as Science names

what happens—occur in the physical organisation which is our bodily frame, the Ego itself being then actualised. But the sound, or the colour, or the smell, etc., is held to be something additional to the executive-operation,—something besides the motion,—and, further, as something capable of ceasing, without having to be reckoned in any way of quantitative equivalence, as always must be done in the case of the happening of the executive-operation itself, where the total quantity of Force remains always the same, being existent calculably as statics when not working dynamically. The Ego itself, as above hinted, is regarded in just the same way as is its sensory-experience: it, too, is additional to the motion, counting while it is actualised as something besides the motion. A philosophy holding these views can only be called Realistic by a large qualification of the meaning of the term.

How, then, does the case now stand? It may be put thus:—

The modern philosophy admits the fundamental conclusion urged by the Realists, namely, the existence of something which is executively-operative irrespective of our consciousness, but adds that the fact of its existence can only be intellectually, not sensorially, apprehended; and it, on the other hand, certifies the truth of the Idealistic view,—that the sensory-experiences exist only subjectively; but it

denies a second Entity to which they are to be referred as phenomena. At first sight, it will seem that something separate and additional, which may be named Mind, or be christened by some word equivalent to that, is conceded in this speaking of an intellectual-apprehension of a causation which we cannot know sensorially, and this production, so to speak, of sensory-experiences which are merely ideal. But the way in which an endeavour is made to establish the position has been mentioned previously, and is sought to be hinted afresh in the above phraseology. The Ego itself is made a phenomenon of the Executive-Operation,—consciousness being supposed to bifurcate into subjective and objective experience.

§ 5. The Use now made of the Idea of Organisation.

As briefly stated earlier, the Entity regarded as physical is assumed to be sufficient for everything by virtue of a potentiality which is developed in-and-by Organisation as it occurs in the course of the executive-operation. This is, in fact, the great working-conception of recent philosophy, and it needs a close scrutiny.

If anyone thinks that the word Organisation, in the ultimate sense in which it is here used, is one easy to be understood, he has not pondered it enough. There is a ready superficial intelligibility in saying that for consciousness there is required a certain

machinery of nerves and brain-substance, which will receive, take on, and transmit specific vibrations. But these terms—nerves, brain-substance, etc.—are themselves sensorial, and do not describe the process of Organisation, but the sensory-experiences which come about as the results of it. Something more ultimate is in question. The furthest point to which we can think back in the search for it is, to say that the something which effectuates the executive-operation, by its own spontaneous process and in the series of its own events, works self-alterations, disclosing what in our abstractest, least sensorially-tinctured phraseology have to be called quantitative or qualitative inter-relations, these giving progressive executive-results mutually conditioning one another ;—the varied happenings in that way being what we mean by Organisation, though we only apply the word to what, for our purposes, are cases of increase, not decrease, of complexity.

Venturing to use the common scientific nomenclature* a little more freely, we may speak of Force quantifying itself in-and-by motion (though it must, at the same time, be remembered that motion is a sensorial term, and, as everyone admits, stultificatory when used finally as descriptive of the executive-process), practically dividing itself into statics and dynamics. By our own manipulation of the process mechanically, and the use of the gradually-discovered

chemical modes, the ways of selective breeding, etc., we can ourselves further greatly affect the executive-order by causing it to inter-act in this manner of mutually-conditioned, varying self-effectuation; being able to do so specifically in a large number of cases in which fixtures of repetition in the operative-process—which fixtures we call Laws—have been ascertained by verification. It is, we repeat, the fact of this natural vicissitude operating,—working self-alteration in the order of the executive-events by means of its own happenings,—which is primarily meant by Organisation. Thus the very same reasons which are enumerated above as constraining us to believe at all in Entity, compel us to accept Organisation as its process. As has been before urged, it is not only that the alterations in the order of our sensations, in the act of our experiencing them, are grounds for believing in this vicissitude of the executive-operation, but the calculations of the intellect as to the procedure of that operative-system outside our consciousness,—that is, our scientific reckoning as to what will be the position of the order of our experience when it resumes,—have to be exactly adapted alternatively on the assumption of Organisation telling with the effect of causing a diversifying of the executive-order in its own events, as well as in the series of our sensations. The procedure of the

executive-operation is in itself inscrutable, but it is intellectually made out that the Cosmos has spontaneity in some way giving vicissitude, and that the vicissitude effectuates its self-variation by a mutual-conditioning which we name Organisation.

If we now try to apply this abstract statement, we may say the modern philosophy conceives that the Entity, inference of which it has retained with more-or-less of distinctness, does—at those stages of its executive-process which give the occasions for the phenomena that are, when the Ego is actual, sensorially-apprehended as the organisation of a human body acting specifically—actualise the Ego, in connection with which are developed those sensory and other experiences; the egoistic-actualisation itself obeying certain working-rules of the executive-operation which are sensorially apprehended as bodily-states, namely efficient blood-supply, adequacy of nervous substance, transmissions of vibrations, and so on.

§ 6. *Restatement of the Problem as it now presents itself.*

It is now made more obvious what is involved in this inquiry; although, at the last stage of all, it will have again to be restated somewhat differently. The question may here be proposed thus,—whether this Force, or whatever be the best name for it, which effectuates the executive-order that we intel-

lectually-apprehend in connection with our sensory-experience, is the only Entity? It is better, for the moment, to put the case in that way, rather than to speak of another aspect of Entity. Plainly, the making out of what would have to be recognised as a second Entity will imply this,—that our intellectual consciousness shall by a set of inferences to that effect make us aware of another causative-order operating additionally, in at least some of the phenomena of our experience, which order it is impossible to identify with the first-named executive-order, owing to contradiction of style, or (using the only nomenclature which is yet available) excess quantitatively, non-correspondence in order, periodical suspensions, etc. All depends upon whether or not, when the whole facts are taken into account and held in recollection, the intellect gives a set of ideas amounting to an apprehension of separate causation as a part of the experience we then have. If it does, the evidence for the one Entity, or for the second and different aspect of Entity, is just the same as for the other.

§ 7. *The "Style" of the Material Causation.*

First of all, it is needed for the purpose of any comparison, or contrast, like the one hypothetically propounded here, to get as ultimate a conception as is possible of the *style*, as we have

termed it, of the Physical Entity, that is of Force, effectuating the Executive-Order which is intellectually calculated from the occurings of the occasions of the sensory-experiences reckoned as parts of a series,—verifiable omissions of the experiences, when we do not in our sensating follow the whole series, having to be included in the reckoning. The fundamental characteristic of that Executive-Order, it is now agreed by everybody, may be 'set down as this,—absoluteness of quantification; the sum total of efficacy always stands the same,—statics and dynamics being exactly reckonable as equivalent; that is, every event in the Executive-Order implies cessation or non-occurrence of a diverse event of the same operative value. It is the proper pride of modern Physical Science to have verified this principle in instances sufficient to conclusively establish it.

The point especially to be borne in remembrance, let us repeat, is this, that these calculations apply not merely to our sensory-experiences,—sensible phenomena in one kind disappearing out of our consciousness in specific quantity when sensible phenomena in another kind are experienced,—but the principle holds good of the intellectually-apprehended order of the Executive-Process which effectuates itself irrespectively of our sensory-consciousness,—we only becoming cognisant of progress having been made by it affecting the position:

and subsequent happening of experience on our awareness resuming; the operative-progress being as strictly calculable, on that rule, for the interims of our lapsing as it is for the periods when we are egoistically-actualised.

Now let us again recall the very significant circumstance mentioned at the beginning of this treatise, namely, that our consciousness has no physically-operative efficacy or value whatever. That is to say, its occurrence or non-occurrence does not affect the Executive-Order which is intellectually apprehended in the material world as effectuating itself betwixt as well as during our sensating: the calculations for the operations of the physical system having to be kept the same for the procedure happening while our consciousness is suspended as for the procedure when we are egoistically-actualised. It would not, unless that were made out, be a valid argument to say that the very fact of our awareness being able to lapse is in itself a departure from the style of Entity regarded physically. The reply would be possible, that consciousness might be expected to lapse if it was one of assumed *alternative* operations of that Entity,—doing so necessarily, in fact, so soon as the alternation of mode made another step in its seriated-progress. But it seems to be established, that with respect to consciousness there is no evidence of any such quantitative alterna-

tivity. Sentience, we repeat, has to be admitted to be a wholly added phenomenon,—none of the physical events are altered in grouping, in rate, or in any other executive-way by its arising. No part of the efficacy of that order supposable as otherwise operating in a different way, has to cease, to not occur in that other operation, for consciousness to be; and when our consciousness suspends nothing physically happens in any mode of equivalent change. If we make the description as close as the phraseology available will allow, we may say that Motion has the same executive-history within the body as without it; the physical-activities which take effect in the nerve vibrations, the cerebral tremors, etc., which are the sensorial terms for the executive-operations along with which our consciousness happens, show no transformation, no arrest, no quantitative loss or modification for consciousness occurring. They just pursue their operative-course irrespectively of it,—molar and molecular changes exactly fulfilling the intellectual calculations of the physical-efficacy, as they are made without anything being allowed quantitatively for our consciousness arising.

The contradiction of style that we spoke of would come in here, namely, if the Material Entity in the case of our Ego and its experience had to be supposed to make a clear addition to its own operation, —the addition, however, not having any physical

value, since it affects none of the executive-operations neither on its arising nor on its ceasing.

But in saying that a contradiction of style is thus shown, the phrase itself needs scrutinising. What it seeks to name is certainly a variation of what we term the physical-method of Entity, but can the intellect identify the occurring of consciousness with the operating of the Executive-Order on the supposition of an enlargement of efficacy in a different mode at a given point, so to speak, of the Entity's self-subsistence? Later, we will indicate the character which this would give to the Entity when finally considered. But, at present, it is better to take the question as it stands. Let us go on to consider more particularly this question of possible enlargement of efficacy.

§ 8. The two Possible Ways in which Enlargement of Efficacy could take Place.

An enlargement of causative-efficacy there somewhere clearly is, and there seem to be but two ways in which the intellect can connect it with Entity physically regarded. Either this added event of the arising of our consciousness is operated by an increase of efficacy which develops in or along with the Entity's activity within that small portion of the Executive-Order which constitutes our bodily frame, or else it is assignable to an increase occurring along with the Entity's

activity in certain larger, extra-bodily *situations* of the Cosmical Executive-System, operating at the time on-in-and-through the body.

The whole drift of modern Science, we may at once say, is against the latter view, and in favour of the former. It is obligatory on us to believe that there is a larger, extra-bodily Executive-System, giving and determining the minor one of the body itself, but we only cognise it inferentially, that is, by intellectual apprehension, having no sensory-experience of or in direct relation to it. The reasoning on this point was earlier given in detail, when setting forth the Law of the Actualisation of the Ego. The important consideration here is that the *general cosmical-situation* regarded extra-bodily has nothing to do with the hypothecated enlargement of efficacy in Physical Entity which must be logically supposed to take place in order to attribute to it the addition of the event of our consciousness. That general situation may vary extremely, as is proved by the very different happening of events in the greater Executive-Order without egoistic-consciousness fluctuating, or ceasing; consciousness only does so when the smaller executive-system of the bodily-organisation is disadvantageously affected. This very significant fact holds good when applied to every detail of our experience.

Even in sensation, no added occult influence

evinces itself on the part of the greater Executive-Order, for, although the larger system has a prompting, controlling, enforcing power over the smaller intra-bodily executive-system in the first instance of the sensory-experience, in every kind of it, and has a power afterwards, under certain conditions of what we call intensity, etc., of Impression, to alteratively command and determine the subjective experience, yet in reminiscence and imagination *we can have repetition of sensations without the events in the larger Executive-System with which they are primarily connected occurring, and indeed they can exist along with very different events there happening.* We can in dream see the sun in the sky at midnight; by means of waking fancies, we can at any time, with more-or-less of completeness, subjectively enjoy tastes, odours, contacts, sounds. In most of the instances of this repetitive-experience there is faintness or defect, but that seems simply to be owing to diminished association of fibres in the neurotic-diagram, for in some completely favourable cases the repetition is perfect; and even the incomplete examples go to establish that the experience is reproducible after the first formative-activity irrespectively of the working of the larger Executive-System, excepting as far as that has to give the smaller system of the human body and to support it in the activity required. Nay, as is said above, the presence of the events in

the larger extra-bodily Executive-Order which originally challenged the sensations is not operative, and may be directly nullified, flatly contradicted, so to speak, unless these events override the subsisting activities of the intra-bodily smaller executive-system. With the sun in the heavens at noonday, by dropping the eyelid,—if the other concurrent circumstances enable attention to be controlled,—you may imagine the blackness of midnight overhead. So little as this does the general cosmical-situation necessarily avail. A hundred cases of such management of the attention might be given, all evidencing that the actualisation of the Ego and the rendering of its varied experiences are connectable with the portion of the Entity's operation taking effect *within* the minor executive-system of the bodily-frame.

From the above considerations it follows (using unavoidably a little repetition) that, if we are to refer our consciousness to the Entity as regarded physically, we have to suppose, first, that, at the point where its executive-operation gives the organisation of the human frame, the Entity, by a spontaneous enlargement of efficacy, produces a wholly-added event, namely our consciousness; and, second, that, though our sensory-experience, in each kind of it, only arises in the original instances along with certain inferred occurrences in the large extra-bodily System, which prompt and enforce specific activities

in the small intra-bodily order, the extra-bodily occurrences, when the neurotic-diagram has once been constituted, may afterwards not only be dispensed with, but may be run counter to;—the Ego and all its experiences subsisting with that portion of the Entity's operative-doing which is currently occurring within the bodily system, no matter how changed may be the general cosmical-situation, so long as the alteration of the larger System does not destroy or impair sufficiently the body, viz., the smaller executive-system.

In other words, the Entity having, by the occurring previously of a certain situation, or series of situations, in the Cosmical-Order, given as one of its executive-occurrences what we sensorially term the organisation of the human body, the specific activity of which is attended by the further event of our consciousness, it may be said thenceforward to cut off—if we reserve the above specified limits of destruction or injury—that portion of its operation going on intra-bodily from all mutuality of vicissitude with the larger operations proceeding extra-bodily.

Are we not forced to begin to ask whether these are assumptions which the intellect can sustain coherently with its general conception of the style of Entity viewed physically? Are creative additions to Being, attributed to enlargement of efficacy, and subsequent possibility of isolation in large degree

of the special phenomenon so added, saving it from sharing the general vicissitude of the Entity's larger operations, logically referable to the style of Physical Entity? Or does the suggestion of another causative-order concurring begin to frame itself as part of the intellect's natural explication? But let us pursue the inquiry step-by-step.

§ 9. The Efficacy Depends upon mere "Addition" of Portions of Motion.

In the chapter on the Actualisation of the Ego it was pointed out with some particularity, in a passage speaking of statics and dynamics, that our consciousness is not commensurate numerically with the kinds of the Physical Entity's operations as we intellectually infer them. There are executive-modifications,—perhaps the most readily intelligible description would be to say modes of Motion,—calculable intellectually, which offer no specific sensory-kinds in our consciousness, but are only known by changes in the grouping of the sensations which are causatively assigned to other executive-operations. As examples of them may be named gravity, magnetism, chemical affinity. We repeat that we only know there are such executive-events as these by the ways in which the order of our other sensations, viz., heat, resistance, etc., is affected through their occurring. But if this remark suggests itself generally in respect of the

large Cosmical Executive-System, it has to be specified again with reference to the minor executive-system, that of the body. Our sentiency is not commensurate in its phenomena with the whole of the operations of the Entity intellectually inferred as taking effect physically within the bodily-organisation, but only answers numerically to a few of them. So far as can be made out, egoistic-awareness and the related objective non-egoistic apprehension arise and subsist only when and while a certain executive-operation gives those of its occurrences which we classify in our experience as movements of a set rapidity and volume in the central-molecules of the brain; and, in just the same way, only certain specific agitations of the nerves ramifying outwardly, namely, agitations of a set rate, direction, etc., condition the different sensory-modifications of our efferent-activity. Any rapidities and volumes of motion in the central-molecules saving those special ones, and any rates, directions, etc., in the peripherally-connecting nerve fibres excepting those set ones, count for nothing so far as our direct consciousness is concerned.

To go as far back in the statement of the point as possible, the abating or heightening of the dynamics in the executive-operation within the bodily-system by just a certain specific quantity, a slight alteration of rate, volume, direction, etc., is the signal of the

enlargement of the efficacy of the Entity in the production and specialisation of our consciousness.

Choice has now logically again to be made between two conclusions, viz., the adding of the events of our consciousness has either to be connected with just the executive-operation in those specific dynamics, or else to be assigned to a general efficacy—which is only put forth at that juncture of the executive-operation—on the part of the portion of the Entity which has been self-assigned (in the Entity's own organising-process) to the minor executive-system of the human body,—for we have seen that the notion of a general influence by the large Cosmical Order is stultified. If we examine the first of these suppositions, we find the following difficulty to arise:—Strictly speaking, it is not the whole of the executive-operation in the volume, rate, etc., with which our consciousness arises, that connects causatively with the enlargement of efficacy giving it, *but only the small differentiating quantity which heightens or abates the prior existing dynamics to just the specific volume, rate, etc., that is effective.*

But the intellect, in its notion of the executive-operation of the Entity physically regarded, finds itself obliged to consider these differentiating dynamical quantities as *interchangeable*, since in the executive-operation itself they are simply equivalent and subtractable and addable. For the sum-total

of Force, viewing, as Science now does, dynamics and statics as making a mutually-operative, ever-active equation, is necessarily conceived by the intellect as comprising infinitesimal constituent-quantities, an infinite number of which are present in every activity; and if these are already multitudinously operating in the executive-doings of the bodily-system which are above or below the specific volume, rate, etc., required for consciousness, and which are, therefore, singly ineffective for its addition,—how can the mere multiplying or subtracting of those constituent-quantities (interchangeable and equivalent dynamically among themselves) be connected by the intellect causally with the enlargement of efficacy giving the additional event of consciousness? Again stultification in the intellectual process happens.

We have to fall back upon the second of the above alternative suppositions,—namely, a general efficacy which, at just that occurrence of the inter-quantification, is put forth on the part of that portion of the Entity which has been self-assigned (in the Entity's own organising-process) to the minor executive-system, that of the human body.

But we instantly find ourselves confronted over again with the very same reasoning which we have just been considering, its application being then only made on a larger scale. The organisation of the human body, looked at as one among the total of the

Cosmical executive-events, is but an operation of the inter-quantification of the Cosmical System of the Physical Entity, arising in the inter-happening of its own constituent-quantities, which among themselves are exchangeable and equivalent; and thus the intellect is again unable to connect the adding or subtracting of these in a merely quantifying relation of specific dynamics and statics (namely, that of the system of the human body) with the hypothecated enlargement of efficacy giving our consciousness.

It is not possible, we believe, to carry this part of the inquiry further.

§ 10. *Intermediate Summary of the Argument.*

At this first stage the case may be thus summed up:—

1. The occurring of our consciousness does not, either in its beginnings or its ceasings or its resumptions, tell in any way upon the executive-order operated by the Physical Entity.
2. The general situation of the large Cosmical Executive-Order can at any time be nullified in respect of our consciousness,—only the events of the ~~inter~~-bodily minor executive-order influencing it.
3. In neither the case of the larger nor the minor executive-order can the intellect connect with the mere interquantification of the operative-doings of Entity regarded physically, the enlargement of

efficacy logically required for the addition of our consciousness; the quantities of the executive-operation being necessarily conceived as component and interchangeably equivalent.

If, however, this is a correct tracing of the process of the intellect in the case, then there is made out what may be called an intricacy of non-occurrence in the increase of efficacy giving our consciousness, which stultifies the supposition of there being only one aspect of Entity to be considered,—the intellectual need for assuming another would seem to begin to disclose itself.

§ 11. There is Chronological Correspondence between our Consciousness and the Executive-Operation.

In saying this, it must, however, be remembered that nothing is more clearly established by modern Science than what we have had so often to call a chronological-association between the occurring of our consciousness—as, also, of the specific variations in the sensory-experience—and the events of the Executive-Order implied in the above-spoken-of volumes, rates, etc., of dynamical operation. Test this association how you may,—reverse the sequences of the dynamical operation, heighten or lower the volume, rate, etc.,—you find the facts of consciousness in its lowest grade practically commanded

accordingly. Consciousness most promptly ceases and recurs again along with set volumes, rates, etc., in the cerebral-molecules, and there are alterations in sensation exactly answering to the manipulation of the dynamical operation of the executive-order in the agitations of the peripherally-ending nerves. If you want a certain auricular sensation, a musical instrument is a perfectly manageable apparatus for giving it; and so on of all the other senses. Or if you wish to suspend consciousness locally or generally, anæsthetics make the doing it easy. The ancient crucial question of how this chronological-association is operated yet remains to be considered. Nothing that has been said above touches its solution: modern Science only brings out the fact of the correspondence more clearly, it does not explain it.

But, before adding more on this point, let us turn to the phenomena which our consciousness regarded in itself, as an event additional to the executive-order, offers. In the present inquiry, for instance, it is of much importance to know whether the chronological-association we have just spoken of, holds good throughout the whole of our experience, or if the *Ego*, *when in this way of primary correspondence it is actualised*, operates, so to speak, higher added phenomena in ways which the intellect regards as partially irrelevant to that chronological-association,— effects being so multiplied, and given in so different

a style, that it becomes a natural conclusion that another order of causation has come into play.

First of all, a little comment is needed on the phrase, "chronological-association," by which we have sought to mark the practical relation between the Executive-Order and the primary actualisations of consciousness.

Previously, mention has repeatedly been made of the stultification which the conception of Motion finally lands us in when actually applied. The reasoning forces us to conclude that though we intellectually apprehend that the Executive-Order has its own events, constituting it such an order, these events clearly are not those of our sensory-experience. It is inconceivable that the activity (to use such words as are available to us), which is the Executive-Operation, can have arrests, limits, etc., answering to our demarcations of Time and Space in sense-phenomena. There would be something inaccurate in saying that Time and Space are only names for the necessary insufficiency of our faculties, if it is those very faculties which give the spatial and temporal experiences. If we are forced to think that the phenomena are mental finite delineations within (so to put it) the infinitude of the Executive-System of the Physical Entity, then, that is affirming a specific capability, as well as an incommensurateness. But it is with the latter point we are

here concerned. For instance, we say that we have the experience of Light, or Sound, or Heat, when certain specific vibrations occur in our apparatus, the sensations ceasing the instant the vibrations sink below or rise above those exact rates. It is, however, not possible for us to suppose that the Executive-Process, which we, on the evidence earlier summarised, have to conceive as always being continuously operative, is not just as precisely equated above and below those limits as it is at them. In fact, the intellect compels us to reject the notion of there being any absolute executive-demarcations answering to the sensorial-limitations. The physical activity has to be conceived as fully inter-related throughout its totality in a manner which forbids in the last stage of intellectual apprehending the application to it of Time and Space. Either of those notions, we again repeat, stultifies the Executive-Process. In such indispensable terms as "vibrations," "transmissions," "propagations," etc., the sensory-imagery has to be construed away: it being recognised that the final deliverance of the intellect (got by some fundamental prompting of the egoistic-actualisation) as to the Executive-Operation is, that its mode is *not* Motion, which is a mental conception obviously having to do with those other inapplicable ones of Time and Space. These three are inescapable realities in our experience; according to their deduced rules, all

our practical doings are to be carried on; but it is intellectually certain that they have no validity outside our experience.

§ 12. *First Glimpse of the Second Aspect of Entity.*

The result of this intellectual apprehension, that the mode of the Executive-Order is not that of our sensory-experience, is logically of great importance at the present stage of the reasoning. This conclusion seems to reverse the direction, so to speak, of the expectancy of our observation in further seeking the causation of the phenomena of consciousness,—we have, as it were, to look now more within than without. A kind of mental-economy begins to come into view in our experience, which has to be taken into account numerically, if not independently. *Mind* is made out as a fact,—as a something which subsistently operates, having a collective and entire actualisation when and while it is actual, not being partially and minutely contributed in each fragment of experience as it arises.

Still we must not lose sight of the circumstance that it remains clearly proved that the executive-operation of the Physical Entity has a controlling efficacy over the initial actualisation of Mind, and a determinative power during that actualisation conditioning at least the lower order of the mental experience in exact conformity with its own events.

But the point last reached above, if it should ultimately be established, has this special significance, that it plainly suggests the possibility that the practical control which the Physical Executive-Order has over the actualisation of Mind may be permissive in kind, not actually enabling. If two Entities, Matter and Mind, or two distinct aspects of Entity, are posited, in pursuance of two orders of causation developing, and we hypothesise the assumption that, by some fundamental relation in a common causation which more-or-less, or fully, embraces them both, Matter is made, in its own operation, to appear to repress or limit the efficacy of Mind, excepting in certain specific cases of its own events, which events are inoperative to a more-or-less degree in this way of repression, Mind then coming into play causatively, the facts of what we have termed "chronological-association" between our experience and the events of the Physical Executive-Order would have a possible explanation. That logical possibility would convert into a scientific-apprehension, if verification ever offered itself by a reversal of the controlling process, in any degree, showing itself in the higher experience,—that is, if there was proof that, in certain mental instances, the physical operation was controlled by the mental process, for that would witness to a common causation in which they both stood related.

Very significantly, it is just this which the defenders of historic religion assert, doing so, as it seems, without being aware of the scientific logical need of it. At the present stage of the inquiry, it will be more convenient to postpone following this special point further.

The consideration to be urged here is this,—that, on the above hypothesis, the events of the executive-order of the Physical Entity which we, in the terms of our sensory-experience, describe as vibrations, etc., specifically required to be of set rate, etc., in order that Light, Sound, Heat, etc., may be experienced, are the instances in which the restraining, limiting efficacy of the Physical Entity over the mental causation fails; Mind, in that negative way, getting its opportunities for the sensory-phenomena along with the addition of which egoistic-awareness arises,—its own self-definitions giving the experiences of Space, Time, and Motion, which the intellect refuses to apply to the executive-process of the Physical Entity in itself, though by them it representatively reckons the operations of that System in reference to itself, so ascertaining practically the laws of its failure to restrain Mind.

But the inquiry as to whether or not there is evidence of Mind showing an economy of its own when it is actualised must be followed into more detail.

§ 13. *'Do the Higher Mental Phenomena in themselves offer Evidence of another Order of Causation?*

In speaking earlier of the Intellect (—it may be convenient to take that class of mental phenomena first), we saw that it makes its calculations of the operations of the Physical Executive-System by reckoning with the experiences of the muscular-sensation connected with the use of the volitional-apparatus, employing them as counters. Not that it can, apart from verified repetition, anticipate the course of that order, excepting by guess in the way of analogy; but where repetition gives means of verification, the law, as it is termed, can be calculated by applying prospectively to hypothecated future instances a working-rule drawn from the past cases. In that portion of the investigation, it seemed to be made out that there was an event of the minor, intra-bodily executive-order which could be associated with the intellectual phenomena, namely, that which, in sensorial-phraseology, is described as the motion of the volitional-apparatus. The very furthest point to which we could carry the inquiry was that the intellectual experience was conditioned by muscular tension. The question we have now to try and push as far as possible is the subtle one, whether this explains the whole intellectual process, or if there is, in our mental judgments, our comparisons, etc., what we may call super-

induced phenomena, hinting modes in which that initial mental-experience seems in the applying of the conceptions of number, size, etc., to be made use of rather than itself to develope or to constitute those modes?

Here, as the reader will see, we are recurring to the Doctrine of Relativity. Every judgment implies comparison of at least two instances, and, however we may explain to ourselves comparison, whether by the substitution of similars, or in any other mode, there is something more in the process of judgment than the peripherally-deriving sensory-experiences of the two instances passively presenting in some way of connection, giving extension of neurotic-activity. It may suggest itself that the activity of the volitional-apparatus discharging outwards, so to put it, from the cerebral-molecule, in what was ascertained to be the intellectual manner of vicariously representing the extra-bodily Executive-Order, conditions the awareness of the practical rule which is illustrated in the two conjoined cases. In so far, agreement or difference might be said to mean a particular application of the practical rule, and to be conditioned in consciousness by the volitional-activity answering to it. But is this any meeting of the difficulty? Does it not rather give a further activity to be dynamically unified? However, let us see more in detail how the case now stands.

There is the motion in the sensory-nerves, part of which may be reminiscent, giving the sensory-experiences in the two compared instances, and there is, in respect of the awareness of the practical rule involved, the motion propagating outwardly from the cerebral-molecule into the volitional-apparatus. But whence is physically conditioned that which we must call the collective-awareness unifying these? The only motion left available for this is that of the cerebral-molecule, which, in point of systematisation, occurs between the sensory and the volitional activities. As the physiological process is understood, the sensory activity of the efferent-nerves communicates in a way of challenge with the cerebral-molecule, the propagations of whose reaction, in turn, stir the volitional inner-deriving fibres. What remains to be asked is, how, in the intellectual process, can be made applicable this lineal propagation of movement, which, remembering how it differs in quantity in the various cases of experience, is necessarily conceivable as diminishable and increasable by every minute portion of it,—how can this conditionate the unification of the collective-awareness which every act of judgment implies? Where is there physical simultaneity answering to the comprehensive consciousness? The vibration of the sensory nerve-finial prompting the stir in the cerebral-molecule has, in respect of its individuality, *ceased* before the movement of the molecule

arouses the efferent-nerves by its propagations. But let us go back a moment.

Is it possible to say that the sensory-activity is taken on, so to speak, by the central-molecule in the act of the latter responding to its prompting, and exists representatively, as we may phrase it, in a specific modification of the movement arising in the molecule? This would seem intelligible, but it only covers a part of the case. If it is possible to conceive that the transmitted-vibrations of the sensory peripherally-deriving fibres, can survive representatively in the ensuing agitation of the cerebral-molecule which they challenge, how can that molecule *anticipate* the motion which has not yet begun in the efferent-fibres? It is, indeed, just possible to suppose that it can do this prospectively, by virtue of its own state determining quantitatively the challenge about to be given to those fibres. But, in order to make this good, we have to assume that there is nothing in the way of varying reaction, or "taking-on," in the efferent-fibres, but that the cerebral-molecule absolutely determines what their activity shall be, representing it by anticipation. For, the theoretical purposes of the speculative intellect this would seem to be so, because in those cases the volitional-apparatus is only used in its merest beginnings of activity, the specific consciousness of progressive efferent-operation not being had. But in all actual

cases of practical effort, we become aware of the muscular-apparatus, by its own reactions, quantifying the activity in a way which it is impossible to suppose could be referred to movement in the central-molecule in the above mode of *anticipatory representation*. It may be said that awareness of these reactions reaches us only by means of modifications caused in the common peripherally-deriving sensation through the locomotory-activity. Under that view we have, however, to assume persistency in the consciousness of the effort, so as to mix with the sensorially-reported result of it; and this increases, not diminishes, the difficulty of any attempt at dynamical explication, since it brings in the necessity of, at least, assuming what may be termed substitutory-activity in the physical-conditioning.*

It would seem from this to be wholly impracticable to work, as one may say, the intellectual phenomena of our consciousness with a *minimum* activity of the central-molecule in which afferent and efferent fibres of the brain conjoin;—our experience, in every case where the intellectual process is concerned, runs forward or backward in a way which breaks down the notion of physical simultaneity. Also, it should be remembered, that Nervous Anatomy seems to have established, that the neurotic-diagrams which have to subsist for the higher intellectual phenomena bring into play separated

portions of the brain,—this making the lack of contemporaneousness more apparent by an enlargement of scale.

§ 14. *The same Reasoning applied to the Sensory-Experience.*

It, however, here suggests itself that the fundamental objection may be pushed further still: it seems to have a bearing upon sensation itself. The importance of the point we are dealing with should be fully appreciated. If a distinction can be made out in any portion of our consciousness between its own course and that of the inferentially-apprehended Executive-Order of the world, then, in spite of agreement at another point, the distinction will necessarily give the logical conviction of duplicity of causation acting in respect of Entity.

Modern Science, we have seen, refers our sensory experience to specific events of the Executive-Order, viz., to activities which we describe to ourselves as those of Impression. But as mentioned in an earlier chapter, the impressional-activities to which the sensations are attributed are necessarily conceived as so minute that we are forced to think of groupings of these being concerned in the conditioning of consciousness, no one of them being able singly to tell sensorially; there has to be multitudinous-association of optical, auricular

its inferred events furnishes the *occasion* of the experience, not the causation operating, and that the occasion is larger, so to speak, than the specific current-activity. But let us advance further.

In every case of experience in which the full mental process occurs what is understood to go on cerebrally in the way of motion? There is in respect of the common sensory-consciousness more-or-less of activity in the peripherally-deriving fibres, part of it being reminiscent,—often a great part of it is so,—and there is the volitional-activity conditioning the intellectual conceptions of quantity, the latter occurring associatedly with every part of the intermixture of current impressional and reminiscent sensory-experience. Each portion of this cerebral activity, both peripherally-deriving (sensory) and centrally-originating (volitional), is proved to be diminishable and increasable in any degree, and yet in these acts of our experience all the quantities of it which are effective are conciliated in consciousness into a unity egoistically. But this is only the very simplest statement of the case. Let us recall that Relativity, as fully formulated, puts forward a further universal complication of even sensory-experience. In order to have the experience of colour, it is urged by those thinkers who push this doctrine to its farthest, there must be somehow present in our consciousness an awareness of non-

colour; to have the experience of sound, we must start from, and somehow carry forward, a consciousness of silence; so, in the same way, heat implies awareness of cold, and so on. In every discrimination, too, of the experience of each sense into kinds, as of particular hues in colour, notes in sound, odours in perfumes, etc., there has according to this view to be inter-association of consciousness, giving cognition of diversity. Even if it be argued that the facts of Relativity are really got, not from an inter-connecting mutuality of sensory-consciousness in some way added to the sensation impressionally-current, irrespective of simultaneity of activity reminiscently of specific fibres giving the relation of contrast, etc.,—it being contended that there is such simultaneity of activity of fibres in so far as there truly is the apprehension of contrast, etc., in the sensation,—yet the apprehension of the diversity is in itself an experience additional to the total of the sensory-consciousness, after reckoning in the alleged simultaneousness of activity in the second set of fibres challenged reminiscently in some way of association. There is a multiplication of the egoistic-phenomena to that extent. Given a sensation peripherally referable, and another sensation reminiscently subsisting in so far as is needed to mark off the other specifically, the feeling of the diversity is something besides the sensations. If we,

in this way, narrow the added facts of Relativity into mere egoistic-modifications, to what part of the cerebral-motion are the egoistic-modifications to be referred? Evidently, according to all the preceding reasoning, to movement in the cerebral-molecule,—to a specific happening of that motion.

§ 15. *The Case of the Emotions.*

But we here reach the point where arises the whole question of the conditioning of the Emotions. In the Emotions, as was pointed out when attempting to describe their mode, we come upon a further great requirement of complication in cerebral-motion. For the conditioning of these feelings there has to be intellectual apprehension of the working of physical causation, and Memory and Imagination have to act with, it may be, heightening of sensory-activities into the symbolical style.

Remembering this, it will be seen that in a dynamical explication of the higher Emotions, according to the conditioning-mode explained earlier, there would have to be very intricate systematisation indeed of cerebral-motion. That is, great intricacy is required for what we may term the specific conditioning of pattern and style of Emotion in the classifiable feelings. But first of all, a general remark needs prefacing on the subject of Pain regarded primarily in its generic aspect merely.

When inquiring into the phenomena of Pleasure and Pain, the only intelligible conclusion which appeared to offer in respect of the latter was that Pain arises whenever a neurotic-diagram with which pleasurable emotion has been associated occurs repetitively to an extent which establishes identity in reminiscence,—that is, conditions a like egoistic-actualisation,—but which is also, in some part defective, lacking somewhere in comparison with previous instances, and in so far pointing executively towards its own disintegration. But, as was then hinted, this seems exactly equivalent to saying that the Ego practically takes account of something which is absent from the conditioning-diagram in comparison with a prior occasion. In fact, the issue which now presents itself is this,—How comes Pain to be, if Mind is only constituted in proportionate quantification by the neurotic-diagram then existing, in a way executively-effective for its constituting? The incapacitation of certain fibres (to revert again to sensory-terms) for operating in a recurrent-diagram, might on that hypothesis, as well as explaining a lacking of sensation, account for the diminution to that extent of the egoistic-actualisation or of so much of the general mental phenomena. But in cases of Pain, the egoistic-experience is not merely made feeble, or faint, or narrow; it is in the worst cases vividly ill, intensely self-unsatisfactory. Is not there here some-

thing more than simple inefficacy, or mere non-operation, in a quantitative constituting of Mind? The fibres which do act with efficiency may be supposed to furnish their fractional contributions towards the egoistic-actualisation, and those which fail to act efficiently do not operate in consciousness at all;—that seems to be a precise dynamical statement of the case.

There is, however, an alternative possibility of hypothesis with respect to Pain, and this must be tested. It may be thought that there may be certain neurotic-diagrams which specifically give an ill-actualisation of the Ego. In this supposition, it obviously is assumed that when certain fibres are thrown into activity together, a bad self-consciousness is constructively challenged by them. It is requisite to try to think this alternative out. The first consideration suggested to us by all that is known of the use of the sensory-apparatus is this,—that every one of the fibres which we have to assume as giving Pain has acted in the countless combinations of prior experience without giving it, and has, in fact, in some of those combinations helped in giving Pleasure. For there does not appear to be any evidence in support of the further conceivable notion that there are nerve-fibres the natural action of which is to constitute the Ego painfully, and which only come into use then. That is a point which hardly needs dwelling upon. Pain, in its possibilities of occurrence, does not observe

any such demarcations as that notion would require. But is it possible that any fibre gives Pain when used in what may be called an unnatural way, that is, when the agitations exceed certain rates of speed and limits of size?

This is the supposition which can be seen to lie at the bottom of most of the off-hand attempts at solution which are to be met with in a number of treatises, in which the problem unavoidably offers. Still, looked at closely, that conception does not seem to vary the issue; for, in applying it, we have to conceive that the so-called unnatural agitations can and do condition or challenge Mind effectively in spite of that excess. Dynamically considered, part of the motion would have to be allotted to the conditioning of Mind, and the remainder to the occasioning of the Pain. But, without staying to follow that into its puzzling details, another fact here presents itself. Experience proves that, within large bounds, namely those stated in the sub-laws of Pleasure and Pain, use can cure these enlarged or distorted neural-agitations, preventing them from giving Pain. Habituation even can make them afford Pleasure. Again, therefore, we are thrown upon something collective;—Pain, in fact, appears to be wholly unintelligible unless you take into account something besides the neurotic-activity current at the time.

Now let us return to the question of the elaborate unifying asked in the intricate systematisations of cerebral-motion required for the specific Emotions. As the word which is the class name for the experiences (Emotion) itself intimates, there are, undoubtedly, specific movements connected with them. In an earlier chapter, we saw that the Emotions, in fact, have a natural method of expression, physiognomical, gesticulatory, etc., which admits of, and has largely received, strict classificatory description. The brightening or fading eye, the flushing or paling cheek, with all the related variations of pulsation, have themselves much dynamical significance, even if we had not to go on to speak of the muscular alterations of facial-expression, the uplifted arm, the advancing or retreating foot, and the varied attitudinisings of the whole frame, with the possibility, again, of a more-or-less restraining control of general movement in many of the cases. The accompanying variations of temperature, which in the extreme instances may be very great indeed, bear witness to the large amount of dynamical operation involved.

Further, in the prior chapter, it was clearly ascertained that the Emotions proper, so to speak, are reinforced, amplified, exaggerated by the sensory-phenomena arising out of this incidental bodily-activity. In fact, though we have just used the phrase "emotion proper," it was earlier pointed out that it

is not practicable to distinguish the passions from the corporeal-movements giving the expression of them.

The particular consideration which that circumstance adds, is this,—that, according to all physiological teaching as to the general process of consciousness, this bodily-activity associated with the Emotions does not contribute its sensations to the experience until the specific nervous-vibrations have been transmitted to the cerebral grey matter, and have currently become part of the existing neurotic-diagram. The sensations of heat, of muscular tension, and of general disturbance in the blood-circulation, which are associated with the Emotion of Anger, for example, imply that so many peripherally-deriving agitations are taken up into the system of the diagram, and cohere in their effect in consciousness with an egoistic-actualisation prior to them in point of time at its starting, and which must, regarded dynamically, be physically past. Viewed in the merely executive-aspect, this is another item of complication in the dynamical explanation of the Emotional-experience.

§ 16. *The Egoistic-Actualisation itself shows a Margin of Variability in its Conditioning.*

But, finally, the egoistic-actualisation itself seems to show some play of alternativity in respect of its conditioning-occasions. Let us recall two or three

subtle and very important facts set forth in the earlier chapters at some length. In the first place, each-and-all of the sensory-activities, in spite of very great differences among them of rate, volume, direction, etc., has like efficacy in actualising egoistic-consciousness; secondly, by means of anæsthetics, injury, etc., every part of the actualising sensory-activity can be, in turn, nullified, without its withdrawal from the conditioning impairing the purely egoistic-phenomena, so long as the required *minimum* quantity of neurotic-activity is in some way going on.

If we consider first the former of these two points, we hardly need remind the reader how great is the diversity of speed, size, and relative adjustment of the vibrations in the executive-activity of the different sense-organs. The kinds of the non-egoistic experiences got by the same sense-organ are distinctly made out to imply still further minor modifications in the nerve-agitations specific to each sense. But—and this is the aspect of the matter to be now kept in view—each and every one of these different rates, amplitudes, directions, can with precisely equal effectiveness challenge and actualise the egoistic-experience. For example, it does not signify whether a man is aroused by a noise, a touch, a smell, a feeling of changed temperature; the Ego in all the cases is respondent with just the same promptitude, and is complete in its self-feeling.

Just so, too, during every waking moment of the consciousness as it is thenceforward prolonged, the total of the sensory-activity in the neurotic-diagram varies each instant accordingly as the sense-experiences differently combine,—sounds, odours, touches, etc., alternatively and contemporaneously ceasing in part or wholly, and beginning afresh.

Such variation is, of course, the essential part of the dynamical explanation of the differences of the non-egoistic experience ; and the general hypothesis we have so far relied on has for one of its main conclusions that the egoistic-actualisation connects chronologically with motion in the central cerebral-molecules. But the question which now arises is this,— how the challenges given to those central-molecules in which the special-sense nerve fibres meet, and from which we have to suppose communications to ramify for the conjoining of the experience and for purposes of reminiscence, can be assumed not to vary the rate, dimensions, etc., of the motion in the central-molecules? It is clear from these very variations of the sensory non-egoistic experiences being actually appreciable in-and-by the Ego that there is connection ; and how can this be effected without variable reactions being challenged so as to prevent the maintenance of a specific quantity of motion in the central-molecule itself? Indeed, we have had to suppose that there is such difference of reaction ; otherwise we should be

supposition of which followed into its details is not really intelligible,—the actualisation of the Ego, we repeat, takes place indifferently along with the happening of very diverse dynamical events.

It is hardly necessary to trace the operation of anaesthetics, injury, etc., so as to see how, in turn, every part of the actualising sensory-activity can be nullified without impairing the purely egoistic-phenomena, providing that a *minimum* quantity of activity is in some way continued. In reality, the facts coming under this head give in an inverted way the same process we have just been considering, and are indeed only striking examples of the rule above stated,—namely, that the sensory-activity may and does vary in its sum-total at every moment of consciousness accordingly as the non-egoistic experience fluctuates. But there are some other very significant, if apparently small facts to be urged.

It seems certain, from what can be inferred as to the mechanism of Memory (see Chap. IV.), that the *direction* of the nervous-vibrations conditioning reminiscent sensation is not the same as in the original peripherally-deriving experience. The activity gets its prompting, according to all the reasoning, from an interior central-molecule to which the original re-transmissions arrive from various quarters. When, in the moment of reminiscence, they are reforwarded thence they must arrive in the special sense-organ.

from a spatial position differing from that of the line of fibre by which they originally came from the periphery; being capable, as certain facts intimate, of starting propagations which traverse for some distance the very fibres by which the primary activities in the experience came. Further, all the details pointed out in Chap. V. relating to the substitutory use of Analogue-Diagrams suggest that there must be slight constructive-and-working differences of conditioning-activity which are practically ignored by the Ego. In Imagination, we found fibres act together under the prompting of the Language-faculty which had never been associated by a challenge of peripheral-impression. So, too, we are able to reason analogically.

There arises in these ways a class of evidence which goes to show a margin of variability in the actualisation of the Ego, and, further, that while it is actual, it has a little range of alternative use of the occasions of its non-egoistic experience. These are very significant facts, and we shall have to return to them.

§ 17. *Summary of Additional Conclusions.*

Before going further, however, let us try to give a summary of the additional conclusions which appear to have been arrived at by these further steps in the inquiry. They may be presented thus,—If we take the conceptions of vibrations, or propagations, or

transmissions, seeking, in any conceivable way of Motion, to construct from or with them a dynamical-explication of our egoistic-actualisation and of the related non-egoistic experience, inapplicability and inadequacy appear to arise in the following ways:—

I. The Intellect is self-compelled to reject the assumption of there being in the physical system of the world, any absolute executive-demarcations answering to the beginnings and endings of the sensory-experiences,—the executive-operation (whatever its inscrutable manner) having to be mentally regarded as necessarily giving in every case references to related-activity beyond those limits, in a way of continuity.

II. In every case of what may be termed intelligible consciousness,—that is, where the Doctrine of Relativity is exemplified,—there is a judging by comparison of sensory-instances in some way of interpretation, or unified comprehension, that is of an ultimate egoistic-experience in respect of the sensations, etc., and additional to them, for which there does not seem to be any provision made in the hypothesis of egoistic-consciousness being fractionally-conditioned by the executive-operation. For to assume the application by the Intellect of a working-rule in judging these cases, really enlarges the dynamical-complication having to be unified.

III. In the case of the sensations themselves, a

like difficulty arises out of the same consideration, since we have to calculate large groupings of subtractable and addable units of impressional-activity for each *minimum* act of sensation; the causal-conditioning having apparently to be partly referred to order in succession and positional-grouping in the activities, not wholly to current physical-operation.

IV. The Emotions, again, ask the assumption of a further complicated systematisation of movement in respect of the Intellect, the Memory, and the Imagination. And, further, the cases of Pain, which may be grouped and described as ill experience connecting with defect in neurotic-diagrams from non-repetition of parts historically belonging to them, show evidence that, in all this class of emotional-experience, the Ego practically takes account of the absence from the neurotic-diagrams of activities historically belonging to them. Further, in so far as the Emotions get amplification, reinforcement, etc., from the physical-expression of the feelings, through the use of the efferent-fibres prompting peripherally-referable sensory experience, there has to be assumed a further dynamical-complication, heightening the difficulty of physically accounting for the unification of the experience in the egoistic-consciousness.

V. Since the egoistic-actualisation can be equally prompted by any of the special sense-activities, which in the rate, volume, and direction of movement show

great varieties, it would appear that the Ego's-actualising has what may be called dynamical-optionality within a limited range of quantitative differences. The like suggestion is repeated when we remember that there is altered direction of neurotic-propagations in reminiscence, and new association of fibres in Imagination, etc.

VI. The operation of anæsthetics, the effects of partial injury, etc., show that, in turn, every part of the organic-activity along with which egoistic-actualisation happens, can be nullified without arresting or impairing the purely egoistic-consciousness, so long as the indispensable *minimum* of organic-activity is kept up.

§ 18. *The further Complication of Symbolical, Ethical, and Spiritual Experience.*

Having roughly formulated these conclusions, it may now be further pointed out, that in nearly all that has hitherto been said, we have been dealing with experience in its first literal stage or grade. In earlier chapters it was briefly mentioned, that in the case of the higher realms of consciousness, when the feelings are what is termed ethical and spiritual, the sensory-experience is used over again, as it were, in a representative way, becoming symbolical. How are we to understand that the egoistic-enlargement belonging to the optional reference which is implied

in this apprehension of sensory-experience in a double manner is got? It may be said that symbolism, in so far as the sensory-activity is concerned, is a case of association,—that is, if we connect the snowy lily with maiden purity, and the glow of purple with royalty, the sensory-activities can be traced back to some primitive co-impression. But what we are here suggesting is that there is in all symbolical-apprehension a heightened reintegration of egoistic-consciousness in excess of the actual sensory-activity,—a requantification which the peripherally-deriving fibres cannot give. Certainly, we have to infer an enlarged area of neurotic-diagram in these cases, but mere increase of area in the sensory-activity does not seem to have any explanatory value in reference to the dynamical-conditioning of this heightening of the egoistic-experience, unless we suppose that it occasions multiplicity of reactions in the central-molecules by means of greater ramifications of fibres and an increased number of molecules being included in the systematisation effected in the current diagram. Below, a remark will be found added as to the way in which the Law of Effectiveness has to be kept in recollection in respect of this suggestion. And it must afresh be borne in mind that so far as can be made out the reactions in the central-molecules are allotted to conditioning and quantifying the Emotions. But,

in the meantime, we may apply the remark made before,—that extension of the area of activity seems always to bring out on a larger scale the difficulty as to the contemporaneity which seems to be required for dynamical-unification.

So, again, if it should be urged that this egoistic-addition in all the ethical cases is got from the neurotic-diagram taking on efferent-activity,—that is, the operation of fibres used in the volitions which come into play for Conduct,—the objection made in considering the first grade of cases again arises, namely, how is the unification got with this further dynamical complication of the diagram? In fact, the whole of the reasoning already put forward has here to be repeated, for the Conscience plays with respect to these ethical and spiritual experiences, a part precisely similar to that which the intellectual judgment does in the case of sensations, and like that which what is termed Taste does in æsthetical matters,—the Ego having then not only a comprehensive sentiency of two inter-referring cases, but, also, a self-feeling additional to that related-awareness. Some of the bearings of these facts in the moral realm were sought to be dealt with in the chapter on “The Will.” For the merely logical purposes of this part of the present inquiry they need not be again dwelt upon in detail. The one point vital just now is this,—Does our consciousness in its

mode and its quantifications disclose characteristics which the intellect is self-compelled to regard as irrelevant in point of time, range, etc., to the inferred executive-operation with which the mere actualisation of the Ego is undoubtedly connected? The question of the primary connection between the executive-operation and the actualisation of the Ego yet remains for consideration, but, before quite rightly reaching it, there are two or three other matters to be considered in the general argumentation.

It may (as was above hinted when a remark as to the Law of Effectiveness was postponed) suggest itself that in the cerebral motions there can be a fineness of action and of reaction beyond what we have taken into account in hitherto applying the hypothesis of a dynamical conditioning-operation. There must necessarily be, Science assures us, minute ebbs and flows of activity in the central-molecules, eddies and currents of attraction and repulsion, more subtle than we have seemed to reckon; and these, it may be urged, are the events which quantify the egoistic-consciousness.

In the chapter on "The Hypothesis of the Soul," a set of facts were dealt with which seemed to indicate additions of subtler structuralisation to the apparatus actualising the Ego. It is, however, clear that such additions could only become practically operative owing to a modification, or, at least, an

extension, in the range of the Law of Effectiveness. But the general conclusion of the reasoning did not go beyond this,—that the further experience conditioned in-and-by this extension of process was only most rudimentarily germinal, and related to the ultimate egoistic-consciousness, not being explicit in any fully-realised sensory mode, such as is needed in symbolic-apprehension, but only hinting a pre-habituuation of apparatus which might subsequently develope validity in those ways. Moreover, the cessations and resumptions of the actualisation of the Ego, while man is in this existence, always conform to the quantitative laws of the sensations fixed by the Law of Effectiveness in its first allotted range, before any such additions are supposed to be made to the actualising-structure. Any extra phenomena of this subtler kind which arise in man's experience do so only during the subsistence of that fundamentally-conditioned sensory-consciousness, as being superinduced in relation to it. The point, however, hardly needs pushing further when we remember that if more rapid and subtle activities have to be reckoned the dynamical difficulties in respect of what we have called "unification" are not lessened but are increased as far as contemporaneousness is concerned, since the unification has always to include some sensating going forward at the ordinary unquickened rate of speed.

But to this fact another has now to be added, namely, the very significant circumstance before pointed out,—that a small addition to, or diminution from, a neurotic-diagram will alter the Ego's self-apprehension throughout its whole extent. Pain can be endured for a purpose,—that is, if there be a specific addition made to the neurotic-diagram; a sense of duty can largely modify nearly all that is hard, unpleasant, repugnant. In the supreme cases of Conscience,—that is, where the experience is that to which the name spiritual is applied,—the absence or presence of a particular remembrance, a certain process of intellectual apprehension and arrangement of emotional cast—call it Faith, or by whatever name you will—makes all the difference in the self-feeling.

It is a case to be very closely examined, for we should not forget the inner-arising process hinted at in a previous chapter, by which the neurotic-diagram can be in swift progression decomposed and reconstituted from the shifting dominant focal-point of greatest activity in the diagram. Indeed, as the process was there ascertained, this change is continually going forward. It should also be borne in mind that, so far as was then made out, what may be called the delimitation of the egoistic-experience, as distinguished from the non-egoistic, is dependent upon the efferent-activity. The question, therefore,

arises, whether the addition to the neurotic-diagram in these cases, small as it may proportionally be in quantity, may not by this process of interior reminiscent challenge,—decomposing and reconstituting the diagram,—affect the prompting of the efferent-activity in a way accounting for the bulky change of the self-feeling?

What has to be said on the other side is this,—that, despite the continuous substitution of individual fibres in the diagram in this way of interior challenge, the integrity of the diagram is practically so maintained in the cases where the conception of duty arises, that the sensory-experience preserves its character sufficiently for the requirements of the argument,—that is to say, hardness, unpleasantness, pain, are still felt. So that that part of the diagram remains virtually the same, leaving the change in the self-feeling to be otherwise referred. It is true, that, by habituation, or in the case of being under great excitement, this sensory-activity ceases to tell, but that is a fact to be considered under the working-rules of the Law of Effectiveness, applying to habit and excitement, that is, to Attention. The circumstance does not do away the validity of the other cases, where the sensory-activity is actually effective in the current diagram. In all the examples of the experience to which the name Temptation has been given, it is recognised that the neurotic-diagram

in its lower sensory-activities continues effective during a stage in which the egoistic-feeling undergoes a struggle of modification in some way of duplicity of experience, not agreeing with the superposition of an infinitesimal subtracting or supplying of so much quantitative actualisation of self.

Then, again, if we turn to the question of the efferent-activity, it is at once suggested that the very same patterns of diagram, in so far as concerns bodily-movements,—that is, adjustments of muscular contracting and relaxing,—belong to contrary Conduct, exemplifying virtue and vice. A like volitional effort may be put forward in inflicting an injury and in snatching another person from the risk of one. The fact of the efferent-activity delimitating the inner area, so to put it, of the neurotic-diagram, within which we have to distinguish the consciousness as egoistic, does not, it seems, make the efferent-activity paramountly determinative of the events *within* the egoistic-area. The ultimate self-experience, in its character, though not in its range, can show independency of the efferent-activity to this degree, that the conscience may protest against what the frame is doing. If, then, in the cases now instanced, the neurotic-diagram virtually persists the same in its sensory-activities, excepting in the added minute portion of a reminiscence, etc., which joins on, upon what principle

of mere dynamics is the alteration of the self-feeling throughout its whole extent to be ascribed to that added portion of activity?

Two other conclusions, therefore, have now to be specified in addition to those already given above, and it will be convenient to make the numbering of them run on from the last figures,—

VII. If any minuter cerebral-movements have to be taken into account as conditioning egoistic-modifications, the Law of Effectiveness, operative in respect of the sensating accompanying the primary egoistic-actualisations, has to be supposed to become, in some way, altered to that extent.

VIII. Along with an addition to the neurotic-diagram, small in proportion to the activity otherwise subsisting, there may take place a change in the self-feeling throughout the whole of its extent.

§ 19. *Summary restatement of the Vital Point in the above Considerations.*

The point which is vital in the above reasoning may be re-stated thus :

We find that the intellectually inferred executive-procedure of that System which, existing in a mode that is non-egoistic in reference to us, gives the occasions for our self-actualisation in the opportunities for the sensible phenomena of our consciousness, is in none of the cases a simple physical event,—that is,

a mere propagation of Force,—but is what we have to describe as an elaboration of executive-happenings so complicated that it is impossible for the Ego, in its final apprehension of the process of its own actualisation and of its experience, not to get the conception of another order of causation coming into play to this extent,—that certain laws operate in respect of mere sequences and positional relations of the physical-occurrences, in a way which makes it stultificatory to suppose that those laws get their sanction from a progressively-operating Executive-System,—such sequences and positional relations not being anything added to the executive-procedure as such, but being mental phenomena.

For instance, we have made out that the egoistic-actualisation can and does occur along with executive-events of the most diverse physical value, namely, neurotic-activities in any of the senses indifferently, in spite of the diversity in size, direction, and rate of vibration. The efficacy of the conditioning-movement, so far as the actualising of the Ego itself is concerned, does not, in fact, depend upon a particular absolutely fixed quantity in it, but any one out of a certain series, or any combination of them, suffices. If we pass on to consider the phenomena which the Ego apprehends as non-egoistic, sensations are in the same manner seen to require not only that specific neurotic-activities

shall be occurring at the time in a definitely-allotted portion of our apparatus, but that certain neurotic-activities shall have taken place there within fixed limits of time previously, although, according to all the reasoning (and we have here nothing but the reasoning to deal with) the occurrence of the prior activities can have no operative effect upon those happening now in any way of altering their causative-value, those prior activities having to be considered as expended in propagating their lineal effects. So, again, in the case of the intellectual and the emotional experience, the chronology of the conditioning is partly retrospective and ranges further than the physical effectiveness of the current situation. Specific executive-events must have taken place before, and in respect of those occurring now there must be a particular grouping, which, though it has this chronological validity, happens in the course of the ordinary collocation of physical results, in a way of supposable transpositional-combination, and cannot be conceived as developing any inter-modification among its divisible constituent events that could alter their own proper causative-operation.

In other words, it would seem that this chronological-association, which we have had up to this point to name so often, seems only to be referable to the physical Executive-System by virtue of another order of causation taking note, as it were, of that

System's events in a way and to an extent which are somehow permitted and enabled by sanctions otherwise arising,—this second order of causation being also larger than the Ego considered in itself now is. This is, of course, the comprehensive final issue, and we will consider it separately in a moment. But there is another point which needs at once bringing forward.

§ 20. The Material Order has to be spoken of in Mental Terminology.

In following this review of the evidence offering in favour of there being shown in the mental phenomena a second order of causation to be attributed to Entity, the thought will necessarily have offered itself again-and-again that, in all the reasoning, we have been using terms drawn from our consciousness (which is assumed to derive non-physically) as if they were really applicable to the Executive-Order. It may be asked, for example, whether, in establishing a logical stultification by requiring, according to the hypothesis, that a vibration shall carry its equation backwards-and-forwards beyond the limits of sensory effectiveness, and then affirming that, consequently, the Intellect has to reject the notion of there being absolute physical demarcations in the Executive-Order answering to the sensory ones in our consciousness, we may not be merely playing with words,—“vibration” not being a proper description of the mode of the executive-operation.

At the very beginning of the first chapter this was named, and several times since the point has been taken note of incidentally. In the last stage of the reasoning, an effort has to be made to reinterpret the word "vibration," and all the phraseology cognate to it. There has to be recognised the need for admitting that Motion is a term not really applicable to the executive-operation, and that Space and Time are mental phenomena, intellectually referable to the non-universality of our consciousness. Without, however, again going into the high metaphysics of this question, it meets the requirements of the case here to say that the logical stultification still persists if instead of the terms vibrations, agitations, etc., the most ultimately abstract words *continuity* and *propagation* are used as descriptive of the Executive-Order. The Intellect is clearly able to affirm non-continuity of our consciousness, and it is just as unhesitating in inferring, from its discovery of fixed rules of variation in the sequential occurrence of our experience on resuming, the existence of an Executive-Order which subsists in the suspensions of our consciousness and has inscrutable events of its own. Really, the logical stultification arises from the Ego, by means of a final working of experience in the Intellect, becoming in its own process aware of an incompatibility in attributing the production of intermittent effects (such as our discontinuous-conscious-

ness must be held to be) to that which is continuously existent in a way describable as that of fixed quantity, and operating only by propagation,—which is the absolute assumption in the case of the Executive-Order.

The real question is, whether in order to get intelligibility with reference to a causation giving intermittent-effects, we have not to bring into use another set of conceptions,—those which together offer the idea of Personality; in framing which the notion of quantity ceases to be dominant and restrictive,—the egoistic-awareness, in its highest flight, being able, from observing a certain simulation of creative ability in its own consciousness, to get an apprehension of mere potentiality. But the conception the Intellect frames of the Executive-Order is quite other than that; every instance of verification confirming in respect of it the notion of unvarying quantity. This is a point to which we shall have to return directly. For the moment, it is sufficient to say, that the logical stultification above made out holds good to the last stage of the intellectual process in respect of the Cosmical Order,—when it is concerning itself only with the ultimate affirmations of continuousness and fixed quantity in the Physical System. The issue may, indeed, be finally put thus,—whether another intellectual inference establishes itself pointing to an added order of causation, and framing another set of ideas?

§ 21. *The Practical Relation between the Executive-System and our Consciousness.*

Now we go back to the problem above postponed, and which, at the outset of this chapter, was said to be the comprehensive task of the higher philosophy,—namely, the question, how is worked the practical relation between the Physical Order and the events of our consciousness?

This inquiring into the quantification of our experience is divisible into two portions,—first, the chronological connection between the original occurrence of our sensations and some necessarily-inferred events in the Executive-Order; second, the connection between the sensory-experience and the intellectual apprehensions, the emotional feelings, the aspirations, etc., which are the more egoistic events associating with that sensory-experience in a way of being added to it. The facts have been already stated in some detail in the chapters on Pleasure and Pain, Memory, the Ego, etc. It will only be requisite here to recall a few of them, sufficient to illustrate the only point really now at issue, namely, that of the working-connection between the sets of events. We turn first to the former of the two divisions.

Modern Science affirms that, for the actualisation of the Ego, there must be specific-activity (that is, as we have seen, one of several alternative ones) in the nervous system of our bodily-frame, and that to con-

dition the different sensations we experience during the subsistence of self-actualisation, there have to occur particular activities in the organ appropriated to each sense. Bearing in mind the qualification of the phraseology pointed out in the last section as being necessary, it is quite admissible to say that a sensation depends in this chronological manner upon the happening of a specific vibration, transmission, movement in the respective organ. But what is meant is, that the sensory-experience occurs with the calculable happening of the inscrutable event of the Executive-Order which is alluded to under those terms.

Of the actuality of this practical-connection there can be no doubt. If we manipulate the Executive-Order by the volitional-activity, we can, by its specific operations being made to occur in certain ways, have the sensory-experience repeated with a facility giving full means of verification. Sounds, tastes, sights, odours, touches, etc., can be had with exactitude by specifically working the apparatus of the senses proper to the experiences. The grouping of the senses, and of the possible modifications of the experience furnished by each sense, can be made to vary in order at option, within the limits of the effective range. This practical connection may be traced down to the last minutiae of the working of the Law of Effectiveness. If a certain nervous ratio in a sense organ does not act executively with efficiency in compliance with

that Law, the corresponding constituent of the sensory-experience is not had: a certain hue of colour, note of sound, flavour of taste, or tension of muscular effort, may be unavailable. The same thing holds good of reminiscence: if injury, intoxication, etc., impair the apparatus, the sensory remembrances show a deficiency correspondingly. And by the advance of physiological research, some power is being got of predictively assigning the defect when the injury is known, and, *vice versa*, of inferring the locality of the injury from the defect. So, too, again, with the intellectual process of ratiocination. In so far as there is defect in the cerebral apparatus by which the volitional-activity measures the Executive-Order representatively, there is a blank in the intellectual-consciousness. It is not necessary to use more particularity under this head,—the general conclusion made out in all the cases is this, that a specific sensation, etc., can only be had, originally or reminiscently, along with the happening of a certain event in the minor executive-system, which event is describable (with the qualification above set forth) as a specific movement in the appropriated organ^{*} of the nervous system.

This is the absolute statement of the case under its general aspect, which it was better to make, in the first instance, without any minimising. There are, however, as we earlier saw, certain curious facts

grouped under the name of Relativity, which start the further question, whether the rates, etc., of motion conditioning the sensations are reckonable by an arithmetic so simple as that,—whether with respect to the minor modifications of the experience of a sense-organ—just as we saw was the case as to the actualisation of the Ego itself—a certain range of variability does not show itself? Let us take one of the grossest examples by way of illustration. If after holding the hand in a basin of tepid water, we dip it into a second basin of colder water, and after getting that sensation, replace the hand in the first basin, we shall have the experience of a higher temperature than the tepid water originally gave the sensation of, even if in the interval its fluid has itself cooled according to measurement of the thermometer. The same rule holds of all the other senses. It would seem that this makes a specific sensation in such cases depend upon *a difference of proportion* between two related physical activities, and not upon the rate, etc., of the executive-activities taken singly and absolutely in a way of first quantity. The fact is not without significance; but it need not be further dwelt upon here, since there still is quantification, though its calculation is made more difficult,—the ratio of the proportion between two sums having to be computed varyingly in the place of a scale of figures being fixed by simple reckoning.

If we now try to restate the point at which we had arrived in the language of the hypothesis earlier advanced, viz., that assuming two Entities,—of which one (Mind) was nullifyingly restrained by the other (Matter), excepting on the occurrence of certain occasions afforded by specific events in the Executive-System of the latter's operative subsistence,—it will have to be put thus:—

On the practically favourable operative-event occurring in the Executive-System, there is failure in the disabling of Mind to the extent of the latter becoming able to assert itself in an egoistic-actualisation, the self during actualisation necessarily having sensory-experience; the kind of this sensory-experience being determined by the details of the failure of restraint taken in connection with the range of ability disclosed in that instance of the positive nature of Mind when it is actual,—Mind, at any given moment of our experience during its actualisation, being nullified wholly in respect of its sensory-capabilities excepting as to the sensations then being had;—the specific failures of restraint which permit them to happen, in the manner that they do happen, being intellectually calculable as such-and-such specific rates, sizes, etc., of Motion in the inferentially-apprehended Executive-System.

The important consideration is this, that the Executive-Order, even when, by failure of restraint, it permits

the actualisation of Mind, only fails partially, for it is shown practically to have the power of determining the kind of the sensory-experience the Ego shall have,—the sensations varying with the executive-vicissitudes. The Ego, upon being actualised, has the power of including or comprehending, so to speak, each-and-all of the possible sensory events, but the order and occurrence of them is, in all appearance, associated absolutely with some determining power fixed by peculiarities in the physical event,—the peculiarities, namely, which are practically represented by the intellectual calculations of the vicissitudes of the Executive-Order in the specific rates, volumes, etc., of Motion in the sense-organs;—these representing the instances of what, in the terms of the hypothesis, are styled failures of the restricting, or nullifying power of Matter over Mind. It is obvious that this is a point to be dealt with as thoroughly as possible.

§ 22. The Ultimate Question is, How Matter can be understood to "Nullify" Mind at some Points?

Several attempts have recently been made (among others who have tried it may be instanced the late Professor Clifford) to give that formal completeness to scientific thinking which it so patently lacks, by attributing a rudimentary consciousness to all Matter; assuming a series of heightenings in degree of

sentient answering to advances of complexity in structure, that is, in organisation. The speculations of some of the German thinkers of the last generation were forced by logical necessities arising naturally in the course of dialectical exposition to start the same hypothesis in various forms. There cannot be any doubt that to make a simple non-duplicated conception of Entity give any intelligibility to our experience this notion of conterminousness in Mind and Matter,—that is, the supposition of a quantitative fundamental unification in them,—is absolutely requisite. But what if the facts obstinately refuse to take on the simplicity asked by that doctrine? It is not, however, open to any one to demur to the argumentation at the outset, by saying that the theory of a rudimentary consciousness omnipresent in Matter is a huge hypothesis, unscientific fundamentally, and to push it aside on that preliminary score of sheer imaginarieness.

There is a set of facts as to what may be called the behaviour of Matter in developing in itself organisation, and conserving and advancing it, which, if we fetch in analogies from our own consciousness, and, at the same time shut out some other verified conclusions of Science as to our own process, cohere in a certain ratiocination pointing towards a hypothetical conjecture of that kind.

But—going at once to the negative clause in this

last remark—the hypothesis seems to waver and lose consistency the instant we fix attention on the fact that all the phenomena of this executive-demeanour in Matter, which are depended upon as evidence in support of the assumption, occur in high complexity in the automatic, instinctive, mechanical, chemical activities of our own frames without any consciousness in respect of them being included in our awareness. Further, every man is forced to believe that his sentiency absolutely ceases from time-to-time.

If a limitative Law of Effectiveness is established in respect of the human self-consciousness, actually determining that it shall have original actualisation, and then cessations, resumptions, and re-cessations allotted to it within the intellectually-inferred continuous unvarying totality of the Material Executive-System, not in a way of degree, but in a way of kind altogether, it does not really signify, in the strict ratiocination of this case, whether or not there be supposed to be some rudimentary-consciousness in Force which does not give any immediate witness of itself in our experience when we are self-aware. The problem exists in all its difficulty, if we have to ask, what is it that sanctions the Law of Effectiveness so strictly demarcating our self-cognisance as a narrower sphere within the wider range of the intellectually-inferred Material Cosmos? The logical value of the hypothesis lies wholly in

its implicitly taking for granted a progressive-continuity in the heightening of consciousness, so that all the prior degrees of sentiency shall be carried forward in the advance. The testimony of our experience however is in contradiction to this supposition. When we are self-aware, we know, first, that our consciousness—that is, the specific sentiency of the human being—does not comprise immediate cognisance in respect of all the executive-events of the body, and, secondly, as above stated, we are forced to believe that there are intervals in that consciousness, in-and-during which we become actually non-existent egoistically;—the only guarantee for our resumption lying in the subsistence somehow of an actualising-system which is larger than the Ego. It seems, therefore, that for all the ends of the inquiry we have now in hand, this endeavour to make Entity when only physically regarded explicatory of mental phenomena by assuming heightenings progressively of an omnipresent rudimentary consciousness fails. It is blocked by the fact of a Law of Effectiveness disclosing itself in our own case, affirming that our consciousness is ceasable from time-to-time, and further by our being compelled to believe that by far the greater part of the Physical Cosmos subsists outside our direct experience of it; making no contribution whatever to our direct sentiency, and not being apprehended in

any way save that of intellectual inference. Now we may go back a little.

In the often-recurring statements of the hypothesis which we, for what we may now term working-purposes, put forward at the very beginning of this inquiry, and which has been made to do service again-and-again incidentally throughout it, the limitation constituting this Law of Effectiveness (which, of course, only arises and discloses itself as a Law owing to our direct experience being defectively-incommensurate with the intellectually-inferred Executive System) purported to get its explanation from a supposition of Matter having a power of nullifying Mind; that is, a power of restricting a certain permitted creative ability on its part, at all points of the Cosmical Physical-Operation saving those events of the inter-quantification of that System indicated in sensory-intellectual phraseology as the specific rapidities, volumes, directions, etc., of Motion which occur when our consciousness happens,—those being points of failure of such nullification. The fuller statement of that hypothesis at this final stage where it has once for all to be conclusively applied, clearly brings out its cumbrousness, and, in addition, shows in it an ultimate insufficiency of explaining-power, since it leaves to be otherwise obtained any real intelligibility of how the Material System has any such restricting power over Mind. But the critical

question is, whether the cumbrousness, if it be generally made out that the hypothesis it accompanies lies closer to the facts than any other, does not itself bear testimony to an essential complicatedness in the true explanation of the case,—it and the associated difficulty as to ascribing the sanction of the Law of Effectiveness to Matter, marking our arrival at the end of the ratiocination; the problem asking solution being at last absolutely presented.

The whole of the reasoning in this chapter, in fact, seems to point to the following further and final conclusion, the formulating of which was postponed above, but which must repeatedly have occurred more-or-less explicitly to the reader, namely,—

In saying that the egoistic-actualisation can take place along with any-and-all of the executive-events which have specifically to occur in the sensory-cerebral apparatus at the time when we have experience in respect of them, and which events have to be conceived as dynamically varying so greatly, *it is really affirmed that the egoistic-actualisation itself is not executively-conditioned at all.* Egoistic-consciousness, if it does not occur with all Motion, or subsist with Matter generally,—as we have seen that in respect of our own case it does not,—and if it can and does arise and co-exist with several specific events

in Motion,—as we make out in our own instance that it does,—cannot be causatively referred to Matter or the Executive-Operation without ascribing to Matter and Motion efficacy incompatible with the fundamental conception of their mode.

The point now urged can be stated in a different form. If the scheme of the allotment of neurotic-activity for conditioning purposes; as it has been repeatedly sketched in previous chapters, be scrutinised, it will be seen that when the conditioning of the sensations and the emotions is provided for, there is no specific executive-procedure left assignable to the conditioning of the egoistic-actualisation. The fibres are allotted to the senses, and the cells to the emotions, the activity in the cells being determined by the challenges given by the fibres, just as the motion in the peripherally-deriving fibres is quantified by the Cosmic-activity operating impressionally; and with respect to sensations and emotions alike there are specific modifications answering to the differences of quantification in the executive-operation, so far as the range of consciousness acknowledges the Law of Effectiveness. But it now seems clear that, although earlier in the inquiry, in order to make progress in the statements for the first purposes of it, egoistic-actualisation had to be assumed to connect with activity in the cerebral cells, variations in that activity specialising the emotions in addition, as it were, yet this is

practically giving the motion in the cells a double task to perform, which is contradictory of the fundamental physical conception.

To the other conclusions formally set forth another now has to be added, viz. (carrying on the numbering),—

IX. There is no executive-procedure specifically assignable to the actualisation of the Ego: it occurs indifferently along with a number of executive-events greatly varying among themselves dynamically.

But, practically, there is periodical actualisation of the Ego, and how is it to be understood that this is determined? If man had originally a faculty of adding sensory-phenomena in respect of the whole of what we call the executive-events of the Cosmical System in which he was placed, elaborating his own self-apprehension in so doing, and subsequently lost some portions of this ability, the function only partially surviving in a system of Mind outside the narrowed egoistic-limits and operating in a fixed way of habit in respect of certain of the events, but being no longer cognisable as egoistic, and only an intellectual-inference apprising man of the other portions of the Cosmical System, the delimitation of egoistic-consciousness which would in that way occur would, at first sight, give to the executive-events in relation to which the causal-efficacy remained, the appearance of being an

actualising-apparatus; and when it was perceived, on closer scrutiny, that the sensory-phenomena were additional to the executive-events, and had no operative value, the first suggested description would apparently be that at the points of the executive-operation where consciousness failed, Mind was restrained by Matter. But the enforcement of such egoistic-dwindling, and the continued partial efficacy in a system of Mind outside the Ego's limits, ask a superior causation which operates selectively, and can vary effects. In other words, it is the Ego which has been made to omit and to intermit, not Matter that is nullificatory. How has this been enforced?

Pushing the apprehension of the executive-process of the Physical Cosmos to the utmost, it is impossible mentally to separate the physical events which are supposed to exert a nullifying power over Mind from those which fail to be nullificatory. The equation of the Material Cosmos is, we have seen, a totality including the whole System, and being confronted by it as such, we are, as was earlier explained, by a law of analogy got from our egoistic-experience, under a mental obligation, when ascribing to that System a power of selectively varying, alike by occasional increase or decrease, the quantity of the sum-total of existence, to attribute to it, or to something practically comprising

it, the quality of a Person,—which is a conception perfectly intelligible to us in our own private self-cognisance. At the last stage of all it would, consequently, seem that we are remitted to an exercise of Will on the part of a Supreme Personality disclosed by the Cosmos for an explanation of the enforcement of the limitations of human consciousness. Moreover, a further particular comprised in the above hypothesis needs bringing clearly into the light. The hypothesis, starting from the facts (1) of the sensory-phenomena being additional to the executive-procedure; and (2) of their necessarily implicating the egoistic-actualisation,—the latter being indispensable to them, and having to be regarded as in a sort preceding them,—concludes that the Ego primarily added the sensory-experience; but this evidently, at bottom, assumes that the Ego originally, in some way of union with the Supreme Power effectuating executive-procedure, had an awareness of a kind beyond and other than that now styled sensory of that procedure regarded in itself, which awareness is still hinted at by the fact of the ultra-egoistic system of Mind practically recognising specific executive-events as the occasions, so to put it, for adding the respective sensory-phenomena, though egoistically man now only becomes inferentially cognisant of the executive-procedure by the sensory-phenomena occurring. But we must stop.

We here again find ourselves on the threshold of the region of Theology, which it has been before stated is not included in any way of detail within the scope of this treatise. The inquiry confines itself to the general facts which can be made out as to the process of our experience, with, at furthest, only hints of such explicatory suggestions as those facts run into naturally by a first step of inference.

One point before dealt with, however, needs pushing a little farther. By means of Science, it is found possible for man through his volitional-activity so to manipulate the possible transpositions of the order of the Executive-Operation as to make more frequent the special events which give opportunities for his sensating-function in its fixed kinds, and to vary the sequences of them; being in these ways even enabled, experimentally, by some fresh combinations of opportunity, to challenge what seem to be novel sensory-experiences, but which may be only retrievals historically in his causative-efficacy;—some minor modifications of sensory-experience having, from time-to-time, been actually added in colours, sounds, etc. In this mode, the Emotions, too, can be affected.

A further and last issue now, accordingly, opens before us, viz., does this possible manipulation of the sensory-experience, with the consequent modifications of the Emotions, including in these both

the ill and good kinds, that is, Pleasure and Pain, disclose adaptations for serving as a moral education?

§ 23. *The Final Educative Uses of the Emotions.*

It at once suggests itself that if man be a mystical being now in a state of partial forfeiture of faculty, his present emotional-experience, in either of its two great antithetical kinds, is not likely to answer to the proper egoistic-sentienty he would have if he had full actualisation. Pleasure and Pain are feelings which it has always been found impossible to make out to be a satisfactory and worthy description of man's final experience. Every one fails utterly to apply them to the conception of a Supreme Being. In that ultimate hypothetical case, though the lower terms may have perforce to be used, an attempt to re-interpret them with higher significance is always made. Men, too, whom their fellows from secret recognitions of excellence in their character most reverence always have desired purity, holiness, leaving mere delight to take care of itself; and they were willing to be content with sacrifice, that is, smilingly to confront suffering, as the mode of reaching this inexplicable satisfaction which is better than pleasures. By-and-through this renunciation of Pleasure the egoistic self-certification of advance in the retrieval of faculty seems to be gained. But

before dealing further with that ultimate aspect of the matter, let us return for a moment to the question of the interquantification of the emotional-experience.

In the detailed inquiries in the early chapters, it was established that the Emotions get a primary quantification of mere occurrence or non-occurrence from the sensations. But in the statement of the Laws of Pleasure and Pain, it seemed to be made out, that, in respect of the lower grade of pleasures and pains, those which may be described as organic, the quantification went further than this. Use, fashion, etc., can make great differences in the groupings of nervous-ratios obtaining in the gratifying exercise of the senses. Not only does this hold good of the lower activities of our frame, but the types of beauty among various races of men show striking differences. The question which had to be decided was, whether the diversities are equally gratifying when regarded absolutely. After allowing for diversified-habituation in the manner of using the sense-organs, and for the large extent to which the volitional-activities connected with the moral experience contribute their ratios to the sum-total of the nervous-activity in all such cases, it was found obligatory to conclude that there is an absolute Law of Beauty, basing upon the quantity of nervous-activity,—the various types of conventional excellence admitting of an appraisement of relative superiority

by measurement with an ideal constructively hinted at in the greater facility of exercise in what were proved on general grounds to be the more efficient organic-apparatus for receiving the impressions or putting forth the activities. The inference pointed to is this,—that, in the case of the inferior types there would really be a lesser sum-total of nervous activity—that is, of egoistic-actualising by a quantity exactly answering to the omitted possible ratios of sensory-fibres which are included in the case of the superior types.

It requires an effort of attention to verify this conclusion, that the first grade of Pleasure and Pain is strictly quantified by the sensation. The association of the higher experience in some of its forms nearly always comes in disturbingly. It is most difficult for an adult person to get a case of pure sensation. For instance, the higher pleasure of perceiving a beginning in the abatement of a sensory pain, and of apprehending the approach of its ceasing, will apparently sink the actual degree of pain below what is quantitatively due to defect in the diagram from the nervous-ratios not occurring in a full repetitive way in the organic-operation. Indeed, it is not easy to say what the actual degree of pain should be, for all the rules of the adjustment of attention come into play, physically affecting the diagram by virtue of the Law of Effectiveness.

The same reflection holds good inversely of the apprehending the diminishing and ceasing of a sensory pleasure. It seems, however, to be generally made out that the primary pleasures and pains which may be classed as organic are really quantified by the sensations along with which they occur.

But let us now go a stage higher in our experience. All the facts which are brought together under the name of Conduct show, that in the æsthetic, in the moral, and in the spiritual feelings an enormous enlargement of consciousness is superinduced with sensations for the basis. What is the law ruling in this superior realm? The sensations, we have earlier seen themselves become sublimated and transfigured, till that lower experience is recognised as something other as well as the same, as having, in a word, become typical. The first suggestion which naturally arises in respect of this increased elaborateness of consciousness, is that there is a great extension of the area of the neurotic-diagram by a taking-on of more cerebral-activity in later associated further ramifying fibres and molecules. Observations connected with cerebral anatomy are slowly accumulating, which seem to show that upon the disabling of specific portions of the brain, not directly included in the immediate apparatus of the sense-organs, but whose disabling necessarily involves, it may be presumed, defect in

the complex neurotic-diagrams of Conduct, certain Emotions are missing, and there is consequent deterioration of the character.

That there is such an enlargement of the neurotic-diagram, and also a specific configuration, in the case of the Emotions is patently indicated by the facts earlier dealt with in detail, showing that there is a natural system of emotional-expression involving much dynamical operation in facial contortion, bodily attitudinising, etc. It was, also, pointed out in the chapter on "The Emotions," that owing to the Sympathetic Nervous System and the volitional-machinery (whose activity leads to fresh peripheral-impression) being parts of the apparatus for explicating feeling,—doing this by additions of sensation, with the pleasures and pains belonging to the sensations as perfect or defective neurotic-diagrams arise,—the emotional moods proper have theoretically to be distinguished from this subsidiary-reinforcement even though it may be impracticable to mark the limits really. But that some more subtle actualising-activity is cerebrally concerned in the conditioning of the Emotions in their beginnings is suggested by the circumstance that the associative-sensations of heat, cold, bodily-distension, or shrinking, etc., as well as the automatic volitional-activities, may lag so far in the rear as to become openly inappropriate to the change in the more egoistic feeling. In this way a

man may come to loathe a part of his own feeling,—his own bodily doing,—and long to be delivered from the burden of the defects of the lower actualising-apparatus. It seems to be proved by the reasoning in prior chapters, that in all the cases there is a wider habitude of neurotic-activity in some way superinduced, for there are promptings, however faint, towards reparation, towards retrieval, towards helpful effort, practically amounting to a widening and heightening of Conduct.

Yet, in all these cases, the feeling which is constituted by the mixing of the higher and lower Emotions then taking place is painful: the religious man calls it penitence, and those who repudiate that name will, no matter how scientifically-habituated, plead guilty to a regret that the better instigation did not come sooner,—the regret meaning so much disquiet.

The broad conclusion which lies before us is, therefore, this,—that every step of improvement in the egoistic-actualisation has to be aspired after in the face of Pain; we can travel downwards on a path of deterioration in respect of self-actualisation by inordinate snatching at sensory-pleasures, but in retrieving the descent, or in making higher progress, Emotions that are painful must be confronted. Now, just as we earlier saw that the sensations are not, in the present state of the human being, egoistically created, since man has no power, however much he may wish it, of

causing their cessation, except by obediently complying with, in the act of availing himself of, the operative-working of the Executive System, so here in the case of the Emotions it is impossible to suppose that they are egoistically produced. But they differ from the sensations in this respect,—that we are compelled to believe that the production of Pain, in man's own case, was never within the function of the volitional-human faculty: that is to say, man never would have used the power if he had had it. Pain must have been imposed, and its existence can only be made rational to us by our seeing at least a hint given in its working to the effect that Pain and Pleasure alike are made to be educative,—that they are now so arranged that between their influences man is in a way of mystical option challenged to a wider egoistic-habituuation,—the retrieval when it comes having been won through Pain; so sealing experience, thenceforward, with a beneficent warning against ill assent in future, though there could not be any mechanical urging forward in advance towards restoration. Does the scheme of things give any evidence of this?

According to all the prior reasoning, the facts that any widening and heightening of the egoistic-affirmation is always in the first stage of it painful and that, even when a completion of integration in respect of that occasion gives its own partial satisfaction, a further pain is ever pointed to as opening in prospect

beyond if egoistic-improvement is to be continued, can only be understood agreeably to the doctrine of Pain before laid down on the supposition that the Ego has previously existed in a state of actualisation in reference to which all these improvements are fallings short. Further, the circumstance that in effecting this retrieval, the Ego has to affirm itself in a way of spontaneity, facing Pain and foregoing Pleasure, seems to give a hint that the true egoistic-state is not properly describable as one of Pleasure any more than one of Pain, but as a condition superior in some inscrutable way to both those experiences. The suggested inference, in fact, is that the right egoistic-condition was lost through a snatching at what turned into Pleasure in preference to something else, and that the wrong gratification has been made to run into Pain beneficially; opportunities being in that manner afforded of regaining the right egoistic affirmation by accepting disciplinary pains in mystical options. Certain it is, that the Ego gets its great serious amplification from its actualisation including Pain, while even the higher pleasures following on successful penitences and aspirations seem finally to transform into something better,—an egoistic serenity, freedom, efficiency, recognised as familiar and native to us.

Again, in pursuing these higher phenomena of Conduct, we have once more unawares crossed the

threshold of that spiritual realm in which the dialect spoken begins to be that of Dogma. We retrace our steps to the lower level.

In that purposely-restricted humbler discharge of this task, the last step of the inquiry now remaining is to try and ascertain the functions of Art.

CHAPTER XXI.

ART: ITS FUNCTIONS.

§ 1. *What the Term Covers.*

IN the old, widest meaning of the term, Art stands in apposition to the word Nature, and includes all man's interferences with her original condition. But this large construing needs specialising by division if we are to have any clear notions of the functions of Art.

If we put forward its narrowest, most easily recognised aim first, we may say that by Painting, Sculpture, Music, etc., Art tries after a representative-rendering of the effects of Nature elsewhere than in the original situations where they primarily occur,—in this way creating an added world of manufactured ornament; in which, on a certain stage of free design being reached, the production may become conventional, that is, symbolical, as well as imitative: Art, in both these modes, giving optional, controllable fulfilments of desired gratifications of experience.

In the second place, it may be said that Art seeks to turn the human-activity effecting the above results from being simply a means into an end itself, by striving after excellence in design and execution to the extent of ambitiously desiring to surpass, not only one imitative example by another, but Nature herself; exalting the actual into an ideal, but periodically reverting whenever the latter style stales to a rivalry of closer copying of the real.

Thirdly, Art, by an instinct generated in its own impulses, develops a light, gay, fantastic realm of its own, in which only delight is aimed at for delight's sake; the single duty acknowledged being that of instant enjoyment, it being left to the retrospect to check excess by prudent non-repetition.

In the fourth place, narrowing the first wide general definition of Art with which we started to the extent of recognising that man himself is a part of Nature, and can only interfere with her and modify her by her own means, we may complete the above classification by adding, that man's achievements either in Science, Civilization, or in whatever else, take on an air and aspect of Art when they lend themselves to a wider culture of himself, in a way of enlargement of expectation and ideal rehearsal of readiness for greater occasions than the then practicable requirements of the actual opportunity.

*§ 2. A Summary Account of the General Functions
of Art.*

If we now forget for a moment the above attempts at formal definition, it may be said that the office of Art is to multiply our sentiency at the times and in the kinds needed to fill up defects in the natural—that is, the non-artificially constructed—occasions of life; an obligation of progress being in this way laid upon us from man always developing an ideal out of the actual, making the latter perpetually insufficient. From the very first stage upwards, actuality is too casual and inadequate for the humblest human being. If the statement is to be made more detailed, the naturally-arising, non-artificially complemented experience is not sufficient in quantity, nor rightly alternative in kind, nor, excepting at too widely-sundered times, exhaustively full in challenge of the Emotions. After the best, the most prudent arrangement of our position, in taking on ourselves all the domestic and public relations, the full organisation of our experience asks the final addition of Art in more or fewer of its forms.

It is impracticable to keep up the divisions really, but theoretically Art might here be afresh described as fulfilling the above three wants, that is, having a function answering to each one:—first, the preventing time from staling ever-and-again through sheer

vacancy; second, by rightly-ordered alternations of Attention, giving restful pauses to some of the most frequently used nervous co-ordinations, bringing into play in doing so some others specially kept reserved for this end; third, cultivating the feelings by large selected exercises of them ideally.

Many of the resources used for the first-named purpose it would seem preposterous to class as Art, though, in strict technicality, they belong to this function,—sports, gossip, out-door sauntering, the lighter kinds of reading, going into company, frequenting entertainments, the spectacular ones and those of other sorts, travel, etc. The big vague word Recreation is now generally used to designate these methods of artificially multiplying sentiency. The meaning conveyed by the word increasingly includes a recognition of the need for relaxation and change, and, even beyond that, of a wholesome improvingness in versatility—kept within due limits—for its own sake. This witnesses to the impossibility of keeping the three divisions distinct; for those significations of the term derive from the other two functions. It is, however, only when such of the above-specified trivial employments as admit of it are carried to a pitch which makes them run into one of the other uses that they disclose their alliance to Art. This is done instantly if there arises a genius for excelling in any of them, no matter how humble

the kind. In the case of the ancient Greeks, no one would deny Art-claims to athletic sports. Even in these modern times of plain forms, our domestic sociality, in its more set ceremonial occasions, is not wholly without an artistic character in the most favourable, best examples of its style. In the days when men dressed richly, their out-door parade was artistically performed; in the other sex now, and also in some male specimens, something of the elaborate habitudes still survives. Further, it is possible for the merest gossip, in the mouth of a person old enough to be authoritative and sufficiently malicious to be keen, to become ornate; the wit and the ill-nature may develope an ideal of sharp intellectual play and wrong feeling. But all these cases are mixed instances. Nobody is contented with merely whiling away the time; the other two needs will obtrude themselves assertingly; and the natural impulse to excellence finally acts, for ever developing superiority.

The examples of the second function, that of generally resting Attention, a holidaying-sort of sentiency in doing so being necessarily implied, are in the nature of the case more special. They betray themselves at once. It is their very characteristic to be apart from the ordinary course, to pretend either gaiety, or some particular interest of pleasant surprise, in one or other forms of that feeling. The

means asked are special scenes, things rare, and if foreign and far-come, so much the better; the objects and occasions obviously should have no serious consequences. This realm of the lightly amusing is extensive. At its best, it rises into glories of elegance and beauty, but, in the extremes, it descends to tinsel and filigree;—for the furthest, lowest, dimmest points of it, mere gimcrack is enough.

Here it may be remarked, that it would, however, save much well-intentioned but somewhat stupid criticism condemning the unreality of the theatre, protesting against a kind of preposterousness in some parts of our dress, and in the upholstering of certain apartments of our homes, and as being also shown in some of the manners allotted to the more leisurely hours of social intercourse, if it were borne in mind that, beneath the grotesqueness, these things have a real use in the sudden and complete disengagement of our ordinary efforts of attention, new adjustments being in these ways challenged in their place. It is easy to ridicule the circumstance of the chief room in every house being tricked out in a style which would seem to be only befitting if we were sophisticated fairies playing at an ornamental-domesticity for a few hours now-and-again of an evening;—also, there undeniably is palpable absurdity in opera being performed in a foreign language;—

the full dress of both sexes, though in different kinds, has an admitted preposterousness. All that can be said on the other hand is, that universal experience shows this artificiality to be in a manner natural; since alongside the world of business and of actual life, a long-descended, shining, holiday tradition of an opposite, unserious sphere, wholly unlike common reality, has always had to be kept up by sheer way of balance. Periodically, the artificiality grows ridiculously elaborate; amusement becomes more laborious than work,—the two almost exchanging places. Then, Satire finds its true duty in exposing the failure, and effecting a sobering through the freshness of a return to plain reality; the laying aside the ponderous triviality being a temporary relief and recreation. But there is an abiding need for positive, unmitigated relaxation. The proper test is whether the influence of the artificiality is to really lighten the spirits: if so, this second function of Art is discharged by it. Criticism must wait for depression setting in;—the ceasing of a light natural laughter is Satire's due signal. Further on, an attempt is made to point out how modern Physical Science seems to be destined to supply, at least in a partial way, this natural want in fresh modes divested of some of the old childishness. But in past times, and also now, this preposterousness of amusements must be set down as unavoidable; something of the style must continue.

Necessarily, if you can find the heart to say it, this second function of Art, though natural and real within its limits, signifies a defect (it is true it may be said to be over-ridden in the end) in us and in our lot, rather than an excellence. There ought to be an incessant attempt to narrow its sphere, since it will perpetually strive to encroach. Fortunately, this triviality, in turn, runs into the third function at some points,—that is, it tends to rise into high Art. But before going to the other division, a further general remark has to be added; for who can resist the temptation to say all for Art that may be said for it, and all the more so from a foreboding that the last word of all to be spoken at the end of the chapter will seem in part depreciatory?

If our time had been made to be fully occupied in some way of adequacy with pressing natural cares, and human life was so arranged that experience could have alternated itself rightly by a mere change of formal duties, without any admixture of triviality, not only would it be difficult to conceive how men could be sufficiently tested morally, but a certain liberalising spontaneity of culture growing out of this gay irrelevancy would, as it now seems, necessarily have been lacking. In a grave, slow, oppressive fashion, the play of the impulse for progressively excelling might have made each practical art become seriously ornamental. But, by the engraft-

ing of the need of mere amusement on the naturally-developing excellence of the operative-sciences, Art receives its richest light, its elaborate finish of style, and its noble superfluity of scale. Building all the quicker and the more freely rises into architecture,—sound more joyously becomes music,—colouring with eager humour passes into painting,—speech, more fluently variable, grows oratorical, expanding into literature. The last stage of Art has, in fact, this composite origin.

For the explaining in detail of this third function of Art, we must go back to the illustration of the sub-laws of the Beautiful and the Sublime given in the earlier chapter on “The Emotions,” and there left over for resumption at this place. They are the fragments into which the final criticism relating to Art necessarily divides. It will be recollected that only two of the laws were then dealt with at length; here the rest have to be taken *seriatim*.

§ 3. *Sub-Laws of the Beautiful, the Sublime, etc.*

The first law *—viz., that a thing is beautiful in proportion as, without stultifying, without interfering

* It may be more convenient to reproduce these Laws textually, as foot-notes, from the chapter on “The Emotions.”

I. A thing is beautiful in proportion as, without stultification,—without interfering, that is, with the identity of its class in reminiscence,—it engages a greater number of the senses; one sense necessarily taking lead.

with the identity of its class in reminiscence, it engages a greater number of the senses—admits of easy illustration. Can there be any doubt that the having odours in the case of those flowers which are so blest, is for them an added charm,—or that those who are without them would be still lovelier, if, from amidst their graceful forms and glowing colours, the soft breathings of perfume invisibly arose? It hardly can be questioned that, if the old fable was true, and the orbs of the Heavens shining in their splendour let fall through the midnight stillness distant melodious harmonies, a further glory would belong to them. Or, take other instances. Let the sculptor add to the white form carved in the marble the unnecessary but completing finish of bright polish, and its beauty is more richly delightful. Turn a precious stone to the light so that it reveals its translucent as well as reflected rays, its coloured glows or sparkles, its fadings, its rekindlings,—does not its beauty heighten? The reason for all this has been given in the earlier chapters; the association of diverse sense-modes gives multiplication of consciousness, and assures the egoistic-actualisation by a favourable opportunity for it.

It scarcely needs adding, however, that, as is stated in the law, there must be no stultification; the reminiscences of the class must not be narrowed,

nor made to conflict with other memories. Odours added to the diamond most likely would be such a stultification; the raising of the soft recollections of flowers would militate against the idea of the brilliant's equitable reality, its adamantine everlastingness. There would be a diminishing of consciousness, instead of its enlargement,—what was added to the totality being much less than what was taken away.

The second law* states that the feeling of Beauty given by anything increases in the degree in which the above spoken of associated-activity of the senses that the object arouses has been co-ordinated by previous experience; so that they act with the most perfect adjustment of Attention. This, indeed, is not much more than a corollary from the first law. But it suggests an explanation of the opposition of colour and form;—this is owing to an inherent impossibility of attaining in their case this wished-for result of fully co-ordinated attention. The fact itself has been well pointed out by a great modern writer—Mr. Ruskin. There does not, when it is scrutinised, appear to be any mystery in it. It is the natural effect of colour to enforce expatiation in observing for its own enjoying,—to arrest progress, to ask amplification by delay; but

* II. Our apprehension of beauty increases just in the degree that the associated-activities of the senses the object arouses have been co-ordinated by previous experience; this securing that the senses act with greater coincidence,—that is, with the least interference and distraction of Attention.

this is wholly antagonistic to a rapid and exact delimitation of form. The two sensations, within certain limits of intensity, are nearly unassociable; in that range they are opposed, and in so far mutually destructive. In Nature, their reconciling is not attempted.

This law, it may be pointed out, gives an obvious reason why the painting of sculpture must fail; clear definition of outline, which is the charm of statuary, is obstructed at every step by the diffusive hues. In mere polish of surface, the mutual interference is reduced to a *minimum*, and is more than compensated. There is, however, apart from sculpture, a limit to the degrees within which this incompatibility acts destructively; it is possible to cultivate an accommodating-adjustment within a certain range of the two sensations, so that a valuable pleasure or set of pleasures may be got from objects notably conjoining colour and form. Pattern is capable of affording real enjoyment. The acquirement of this co-ordination of the associated-activity is one of the tasks of Taste,—one of its chiefest tasks. It necessitates some subduing of the colours in part; and the inability to find pleasure in such subduing is always a mark of rusticity of sentiment,—in fact, a sign of miscarriage of this law in the person showing such inability. The remark applies, more-or-less, to all the other senses. There is always an advantageous combination of them,

which is least distracting to the attention. An odour too pungent in a flower would necessarily interfere with the enjoyment alike of its form and colour. If anything surprises, it upsets reminiscence.

Indeed, the whole class of results signified in practice by the term GOOD TASTE comes under this law, as does all belonging to its cultivation. Taste can have no other rational foundation than that of the most advantageous co-ordination of the different impressions, so that in reference to the object or occasion each sense shall have the highest effectiveness agreeing with greatest total of effect in the whole taken together. It is in oft-repeated leisurely trial of the reciprocal adjustment of this activity, and a subduing of all solicitations of the attention to the right point of mutual accommodation, that the cultivation of Good Taste lies.

Law III.* is to the effect, that a thing is beautiful in proportion as the actual current impressions in any individual case are reinforced, supplemented, and perfected by reminiscences of other objects of its class,—in other words, as it fulfils the type of its class. On no other point connected with these questions has so much that is mysterious been written as in reference to a beautiful thing realising

* III. The thing is beautiful in proportion as the actual current impressions are reinforced, supplemented, perfected by reminiscences of other objects of its class,—in a word, as it fulfils the type of a class.

its type. It has been urged that we cannot tell whether to style a thing beautiful or not until we have seen many examples of its kind, and so are able to make a judgment of comparison. By the fundamental principle set forth in the early chapters, that all consciousness is cumulative and historical, and that Beauty stands for the economical enlargement of sentiency (including non-admixture of pain from disintegration), the mystery appears to be greatly put aside. The stirring of numerous reminiscences which cohere is necessarily an enlargement of consciousness; the advantage of a thing's reminding us in this general way of many others is evidently so much gain. A "type" in this limited sense of the term is, in fact, neither more-nor-less than a useable collective-remembrance of the kind: a thing's fulfilling its type means that it makes full use of a historic-grouping of our reminiscences. To this important point, we shall have to revert later.

Law IV.,* affirming that anything which, having been part of a totality that afforded us great pleasure, afterwards serves as a cue to a general remembrance, affects us with the beauty of the totality, which may be far in excess of its own claims to simple beauty, was one of the two dealt with in

* IV. Anything which has previously been part of a totality which afforded us great pleasure, afterwards when in any way serving as a cue to the general remembrance affects us with the beauty of the totality, which may be far in excess of its own claims to simple beauty.

the chapter on “The Emotions.” The Law was earlier shown to form the basis of the Association Theory. The egoistic-actualisation in such instances gives stirrings reminiscently of the cues belonging to the larger prior experience. But the principle of the Association of Ideas has been so popularised, that it is scarcely needful to give examples here. However, a certain aspect of the subject is again mentioned later.

• Law V.* greatly elucidates itself in the course of its lengthy statement. It explains how it is that there

* V. For a like reason of multiform-prompting, whatever by unusual ease, efficiency, range of action, nobility of function, compendiously offers width or intensity of consciousness,—as a bodily feat, authoritative interference by those having great power, the exact play of machinery, etc.; or anything which sums up in itself a great many relations, and is actually or analogically representative of a number of things, the stirring of which in thought constitutes a large expanse of consciousness,—as a mathematical truth, a generalisation of physical science, perception of a moral quality, etc.; also, whatever,—by its being a sign of exhausted, quieted vicissitude, as objects and scenes of past violence, of gentle decay, the spectacle of ripe age, all the dilapidations of buildings or natural objects called the picturesque,—may give great enlargement of consciousness through reference to the past; and, further, anything having natural associations in any way with terror, but which occurs in a way that makes it comparatively harmless, as, for instance, ludicrous acts, grotesque demeanour, etc., occasioning what may be termed illicit-enlargements of consciousness, partially arousing apprehensions against which we are reassured before they have time to be seriously painful;—each-and-all of these things we find to be welcome from a mixed pleasure they bring, owing to the mass of consciousness they excite, although they are not identifiable with the formally beautiful, but, in some of the instances, are much opposed to it; there being, indeed, a multitude of cases in which the test is not so much the degree of definitely-assignable pleasure given as the

are so many other pleasures besides those of the strictly Beautiful, viz., the comfortable, the befitting, the picturesque, the ludicrous;—all of them depending upon the massing of co-ordinations in the neurotic-diagram, though the co-ordinations are more-or-less mixed with disintegrations; further, it makes clear how the true ideals of Beauty are perpetually qualified by local custom, with its illicit aggregations of every kind, and why the changing daily fashions can override good taste by the force of merely conventional popularity and novelty,—those things being themselves great aggregations of consciousness in its lower kinds.

Law VI.* does not need any illustration in its early clauses. A beauty which has been enjoyed with satisfactory disproportion of the pain or disgust risked compared with the total quantity of consciousness that they stir,—the amusing, the comfortable, the befitting in this way largely eking out the beautiful.

Also, in cases where the aesthetical developement is low, and in matters in which there is not leisure or opportunity for the exercise of Taste where it does exist, the slowly heaped-up but, at least, bulky co-ordinations of custom, or, on the other hand, the ever freshly-stimulated ones of changing fashion with its public novelty, may, as it were, substitute Beauty; and do so not unprofitably so long as the higher rationalised Taste for it is not constituted, since, in the absence of that, they represent the largest possibility of aggregated-consciousness—no matter how imperfect it may be—which reminiscence can afford.

* VI. Further, when once frequency of repetition has fully constituted easy apprehension and complete reminiscence, the charm of what is beautiful is heightened either (1) by its being a rare instance, or the last, that is, one incapable of repetition thenceforward; or (2) if we understand its causes, and have a power of repeating it,—there being alike in both cases, though the kinds are different, an effective association of collateral-consciousness; and (3) the gratification afforded by a thing is increased

sufficient frequency to make its observing completely easy, and of which the reminiscence of kind is fully constituted, gives higher pleasure when the instances are rare,—within certain due limits of rarity,—because the nourishing and reparative process has had time to take effect throughout the whole co-ordination; also because the action of the Law of Decrease of Nervous Areas by use previously has been partly retrieved, owing to minor disintegrations of like and adjacent co-ordinations (see Law X.) offering their ratios for incorporation; so enlarging the fulfilment; and, in addition to this, because a special set of supplementary co-ordinations is brought into play by a feeling that we are privileged persons, in so far as the rarity means monopoly of possession, or even of beholding or witnessing. Much of the spurious gratification in Art matters is got wholly from this source. So, again, if we are aware that the experience is a last instance, one never to come again, we attend to it in such a way as unusually to exhaust the impressions, which is tantamount to an enlargement of consciousness itself.

if it adds to itself a supplementary co-ordination from what may be termed the *practical* sense,—if it be well-planned, if the leading features are powerfully sustained in a way which means difficulty overcome, if there is adaptation, utility, etc., shown;—all these perceptions, in fact, standing for enlargements of consciousness; which, in turn, become the leading ones, instead of being merely subsidiary, in every case where ornamentation ought to be subordinate to the greater, grosser necessities of common purpose,—plainness becoming neatness, or, it may be, elegance.

The latter part of the law needs a further word by way of pointing out how it explains a mass of facts of some importance. All the reasonings about subordinating ornamentation to construction do but mean that the most fundamental co-ordination—that which is necessarily present throughout a connected series of impressions, massing with, and qualifying every stage of them—shall be supremely preserved. For example, every edifice, every construction of any kind, should conspicuously offer characteristics indicating its purpose, as that is necessarily the co-ordination which is first expectantly stirred in the mind in the act of beholding; and incongruities of ornamentation, unless the details are so rich as themselves to take possession of the whole attention,—which they very rarely can do,—cause painful disintegrations of that fundamental co-ordination, more-or-less spoiling all the rest. Whenever there is perception of skilful planning, of a due maintenance of leading features, there are large appeals made to the co-ordinations of the practical sense.

The same rule applies to Literature in a hundred ways: plot-interest, as Professor Bain has pointed out, depends upon it.

Moreover, in every experience there is a key-note which must be observed, just as in music. All the decencies and right observance of occasions rest ultimately on this footing. Festivities must not intrude

themselves at some times; the more perfect and absolute the gaiety, the worse would the effect be. The gratifications of the proper, the fitting, the becoming, are all explained by their giving co-ordinations which accompany and enlarge all the others belonging to the object or occasion: by serving in this way as units of accretion to other co-ordinations of larger value, they become associated with pleasures of the high rank. Many illustrations might be given.

The successful performance or achievement of anything difficult will give pleasure, though its doing be neither graceful nor in any way profitable. The apprehensions of failure begin to disintegrate all the co-ordinations which foresight of the consequences arouses, and the timely reintegration of these draws upon the historical and potential gratifications they have stored up. A mere massing of detailed achievement, if it represents large patience, labour, cost, etc., as in the case of some Oriental handicraft-work, and the decoration of Indian temples and palaces, will stir an emotion in us, though the specific type of the beauty is not ours.

Law VII.* explains itself. To take from a brilliant

* VII. An extraordinary enlargement of co-ordination by means of one sense may override, and more than make up for, a diminution of possible associated-activity in another sense;—as angular lines in a cut diamond, in the lightning's flash, in expanses of still water, are more beautiful than the flowing line, because they accumulate colour and lustre in excess of compensating their deficiency in form.

its angular facets, with their burning lustres of live hues, would impair its beauty far more than the substitution of less abrupt lines would add to it. For the same reason, you rob a lake of much of its loveliness if you round it into a perfect circle, leaving it with no gleaming indentations of promontory and bay reduplicating its flash and shimmer. So, too, the wide, slow-bellying illumination of sheet-lightning instantly is quenched out of all remembrance by the quick zig-zag of a quivering forked rift;—it would be so just the same if the consequences of the two were alike. Dugald Stewart, and others before him, well pointed this out.

The next Law, the eighth,* gives the germ of the feeling of the SUBLIME. To illustrate it fully would ask much space. No one will search far into the question of the Sublime without finding that Terror taken by itself is a very inadequate and awkward

* VIII. For very striking, noble beauty, not only must one sense take a decided lead, but in that sense the energy aroused must carry activity beyond reminiscence,—as it were, a little past the former understood real, heightening an ideal; for this is the last enlargement of consciousness: it represents a possibility of a further perfection of things, taking in the future as well as the present and the past, thus giving us *the germ of the Sublime*; the explanation of which does not lie, as has been so often said, in Terror, but in the apprehension of a greater scale of existence,—swelling, towering higher, sinking deeper. It is a realisation of the old ideal, with something in excess starting a new one; there being always unusual enlargement of activity in some one sense whenever it arises; and the feeling of Sublimity is always experienced when such enlargement of sense-activity takes place.

explanation of it. Let him, then, apply the principle of this law, viz., that whenever, in any of the senses, there is a positive enlargement of nervous co-ordination beyond the prior experience, the inflation of the feeling of Sublimity arises. Its first exalting, noble effect is got from an enlargement of the scale of the egoistic-actualisation; the second crushing, paralysing effect arising from a partial disintegration of the first feeling, caused by our apprehending defect in our efferent-ability. Further, it should be noted how, as repetitions class the experience among the familiar co-ordinations, and we in practical ways adjust it to the efferent-activity, the scale appears to lessen; that which was Sublime becoming only beautiful. Indeed, the use of the Sublime is plainly this,—by the astonishing touch of positive enlargement of function in the senses, now in this one, now in that, to increase afterwards the scale on which we enjoy the Beautiful. Something further is said upon this subject later, under Law X.

Law IX.,* that of the fundamental principles of harmony, has for its proper illustration all the facts

* IX. The laws of harmony which govern the production of the Beautiful in all cases where the effect is compound, will, we believe, be found to resolve themselves into these two principles: 1st, that what are called *complementary* in hues of colour, etc., imply the use of the remaining ratios making up the totality of the fibrils of the nervous area acting, but which are not effectively challenged by the leading hues, etc., themselves; 2nd, that *rhythm*, in all its varied forms,—melody in tune,

of each of the *A*esthetical Arts. Even the laws of mechanics, and, indeed, the operations of the Intellect itself, give examples. Its first statement is that the “complementary” in colours, etc., means the bringing into play of the omitted nervous-ratios making up the totality of possible consciousness in the field of the sense acting.

Earlier it was stated that the ratios of nervous fibrils have an inter-juxtaposition giving a possible reversibility of activity accordingly as they are challenged by pattern, etc., in the impressing object. In white light, for instance, the solicitation of activity may be said to be full, equable, unselective,—quite without aggregation of any special ratio. The elementary impressions occur so interferingly that they do not constitute specific-units of sensation available for differentiation of consciousness, but only give the most disintegrated sensation the visual organ is capable of; the organ’s experience, *i.e.*, the apprehension of colours, being reduced to the *minimum*, thus permitting perception of form to develope successfully. But it is obvious that when an object, having specifically decomposed the reflected

elegance in form, grace in activity, etc.,—implies the carrying forward from one moment of an impression or exertion to another moment its ratios, which, though not fully in consciousness, are stirred germinally in the last previous stage; so representing economy in constituting partly beforehand the next succeeding increment, it being already in so far, we repeat, existing in advance.

or transmitted light, makes what we have termed a selective-impression, the mere circumstance of its challenging certain nervous ratios, and exhausting them temporarily by use, reduces the number of potentialities remaining, and so favours the exercise of the rest; for the elimination of some sets of ratios by such activity is a kind of grouping in advance of the others. Thus it is that, having met with green, yellow, and blue in a pattern, we wish for red; that is the ratio which is left available. Also we have here the explanation why, after looking fixedly at a bright primary colour, on turning to a white surface we see its complementary hue there. The unused ratios make a selective-appropriation from the elementary impressions; that is, it is only those fibrils which for the time can take on and transmit the new impressions.

Pattern has for its variations all the intricacies which the muscular-apparatus of the eye can describe in using the colour ratios of the nervous field of vision; those combinations of hues being the most successful which progressively arouse the previously-omitted ratios in the order of the omission, so exhausting the totality of capacity in the organ with least repetition of over-challenge given to the ratios already spent. How delicate and innumerable the simultaneous and successive muscular-tremors of adjustment are in the instant apprehension of an Indian pattern, and

how small a fleck of colour or gleam of gold tells in that elaborate vision of fixed line and flying curve, amidst all the soft glow and sparkle of surface bloom, there are no words fine enough or flexible enough to describe. Again, in looking at a landscape the lightning-like quiver of a single glance of the eye is able to start the cues which in the neurotic-diagram track out in the minutest maze all the scattered tints of earth and heaven. What we have said of the eye we may say over again of the ear.

All the subtleties of counterpoint frame their mysteries by this plain rule. A sound, in order to give special pleasure in following another sound, must draw upon the ratios which its predecessor has left unused, but which were gently stirred by it in anticipation: if the note occurs in the wrong order, and asks for ratios which are exhausted, or that were not preparatively summoned, and which, consequently, are not rightly forthcoming,—those, that is, which do not act in part reminiscently,—there is a disintegration of consciousness, and pain is given. The nearly inexhaustible resources of harmony in a full orchestra are accounted for by the wonderfully intricate mechanism of the auricular organ, by the multiplicity of its fibrils.

In every sense which is constructed on the plan of infinitesimal units of impression capable of grouping

in consciousness in a related-experience, and being temporarily exhaustible by use, the same rule must necessarily hold good. It governs all our other sensations,—taste, smell, touch, etc.

The second principle underlying these harmonic laws is, that rhythm, in all its varied forms,—melody in tones, elegance in form, grace in activity, implies the carrying forward from one moment of an impression or exertion to another of ratios which, though not fully present in consciousness, are germinally stirred in the last preceding stage, giving an economy of continuity and anticipatory developement. Proofs of this lie to hand in every direction. A good musician will tell the key of a composition before he has heard half-a-dozen notes. Who does not perceive that there is *maximum* continuity in every rightly-proportioned curve,—each point of it recording the previous one, and predicting how far that coming next will alter the line? It is true that a straight line is the shortest way between two points, but it also is true that the greatest space which can be traversed in a given time with the least amount of exertion will be that which describes the most graceful movements. This can only be because the increments were freest, fitting closest. In an act considered in itself, apart from results, deviousness is not loss: it means that activity has best and most fulfilled its own impulses. Only in

reference to some other consideration flowing from it—convenience, and such like—is there any gain in a straight line.

In every case, the explanation of harmony will be seen to rest at bottom on the same fact,—namely, that, in all our experiences, there are subsidiary accompaniments of affiliated-impressions stirred below consciousness, the fulfilment of which in the next moment amounts to a gain in time; and so is in consciousness economical, preferential, advantageous over all others: any other order of succession in impressional-activity involves some degree of discontinuity, waste, disintegration, which, on reaching a certain degree, becomes painful. Further, this subsidiary stir of ratios below consciousness accumulates expectation of variability by laws of its own; insisting, beyond our powers of perfect calculation, that the melody shall now rise, now fall, —that the curve shall next widen, next contract itself,—that the motion shall now slacken, now again put forth a growing speed, if gracefulness is to be preserved. Owing to this, it is not alone the exhaustion of the fibrils acting which affects harmony; whenever the subsidiary ratios stirring, by virtue of these hidden impulses, accumulate in a certain direction, they make change necessary by a displacement of the expectation of our attention. In reasoning the same thing obtains: even in the speaking or the

reading of a sentence, after a certain point, the meaning is in every part of it.

Law X.* has a very wide range. The practical need for employing contrast is a commonplace in every Art; this law gives the reason for it. It certainly is not that the absolutely simultaneous experience of associated bitterness heightens a taste of sweetness, or that the contemporaneous occurrence of a harsh sound softens a musical tone beyond its own proper quality. From such perfect simultaneity no gain could arise; at the best, there could only be nullification of Attention. The added lusciousness upon the palate, the richer resonance in the ear, come a perceptible space after the pungency of the olive, the grating of the discord. What is this but saying that some fibrils, which the bitter taste and the uproarious noise have torn away from their associations,

* X. In a continued, sustained act of sensation, or a related series of such acts, a certain degree of disintegration of co-ordination, if the details of it be on a scale sufficiently small not to control Attention wrongly by the pain they give, is advantageous; such minute amounts of pain being more than compensated by the disintegrated fibrils being available for enlarging the co-ordinations that are prosperously fulfilled. For a fibril—owing to every nervous area when acting increasing in value throughout its whole extent at every addition to it, such addition operating as a general increment, every elementary unit in the co-ordination having relations with every other in it, both in the way of impression and reminiscence—counts for more in consciousness on being integrated into a large auspicious grateful emotion of pleasure, than it reckons for the other way as a dilapidation of a small co-ordination which is injured in it.

This explains the use of discords, incongruities, contrasts, within due

disintegrating them, are instantly welded afresh into an enlarged co-ordination by the enchantment of the current-sensation, and that this freshening enlargement can only take place by available disintegrated-fibrils being progressively afforded in that way? In this significance, and to this extent, but in no other meaning, and not beyond those limits, is Pain in mere sensation the parent of Pleasure.

It is, in fact, by these means (as was hinted earlier) that the Law of the Decrease of Nervous Areas by Use is counteracted in our happier experiences; the much praised principle of Novelty meaning neither more-nor-less than a dislocating interference, to this limited extent, with reminiscence, so as to break up within those bounds some of the old co-ordinations, and by means of their fragments revivify others. It is owing, doubtless, to this circumstance that a part of the relation between Terror and the Sublime has been so exaggerated. Anyone will recognise the great part which Novelty necessarily plays in connection with the Sublime, and our probing of

limits, in all cases where the experience is more than momentary: their use consists in providing extra-ratios for instant absorption into the successful co-ordinations, so giving the superior joy of improving, to that extent, upon the stored-up reminiscences. Further, in cases of prolonged impression or effort there will be momentary stages when the occurrence of a partial grouping which by itself would be indifferent, or might give pain, will be welcome in consequence of its answering to a serial inter-juxtaposition of fibrils in exercise, and, in cases of over-exercise, being useful in retrieving a *strain* of the co-ordination.

the inquiry a little way back will further show the disintegrations it covers. In Terror there is always a perception of more than Novelty.

A mountain with no scars upon its sides telling of the rage of storms; no dizzying sheer descents of plunging precipice; no gulfs; no inaccessible peaks; but a mountain showing all gradual, smooth, shining,—this would not be sublime in the second of the two senses above specified, no matter what its mere size. To give it sublimity of that kind you must mark it with violence. It needs, here-and-there, singeing and seaming with traces of the flaming thunderbolt; fringes of black struggling pines must show dwarfed and painful on the narrow edges of its unsheltering cliffs; you must hang somewhere amidst its higher snows the fatal avalanche, held only by creaking, faulty chains of ice; the beaked-and-taloned eagle has to sweep and soar about its cliffs; it must have mysterious ravines, usually black with silence, in which you know lie bleaching the bones of victims of the precipice and the eagles,—these dark abysses changing at times into the sudden crash and roar of unexplained tumult. The secret of the fearful addition to sublimity thus got is this,—that each circumstance in that list covers a disintegration. So, too, a sea, if the light furrows of its waves were always uniform, if its sky was always serene, and the gay vessels idling on its easy tides never had to furl their holi-

day sails and fly for life to the nearest port, hunted by wind-and-billow, might well be beautiful,—sublime in the second lower meaning it could not be. For that some touch of savageness, some hint of destruction, must always be given to dislocate associations, offering parts of them for enlargement of the instant experience. In very striking cases of the Sublime as mundane scenes afford it, the disintegrations are always just at the risk of becoming too numerous,—of being more than the sense which is acting in a leading way can integrate. Should that happen, the feeling degenerates into Terror, becoming torment.

But, returning to a humbler line of examples, we may add that the necessity for enlarging the disintegrations keeps exact pace with the action of the law of the decrease of nervous areas by frequency of use. The high colourist in Art can least do without the balancing shades; a perfect musician is most sensitive to the lack of the heightening under-dissonances; the epicure needs stronger condiments than the plain man who has not so minutely co-ordinated his sensations of taste. The operation of the law in moral and spiritual experience, in producing and maintaining our highest sentiments, is not to be lightly handled. But it seems to have application, also, there.

Turn now to the latter part of the law, the bear-

Lastly, there is the fact, that it is a gratifying relief, after long exhaustive use of a sense in high strained exercise, to quiet it by an indifferent neutrality of impression: it gives content to turn from a brightly-coloured pattern to a blank surface, to listen to the unmeaning hum of the concert room or theatre after the long-upheld music of singer or band. But a plain wall and the noise of voices in a crowd mean the recurrence of visual and auricular impressions in a way which releases all the groupings of their special co-ordinations, and which, consequently, sets free the muscular-apparatus of the sense;—that is, the overstrain of all the fibrils ceases, and nine-tenths of the areas that have been in use are left at liberty for repair, in other words for the comforting soothing of nutrition.

It will have been perceived that the Eleventh* and last sub-law—that which we have styled the Canon of the Beautiful—has appeared and reappeared more-or-less in all the others. It is, indeed, a summary of them. The action of each law helps in the exemplification of this final rule,—that the supremely Beautiful can give no pain. It means a complete

* XI. Finally, what may be named the golden law of Beauty, earlier hinted at as summing up all the rest, is this,—That the pleasure of its fair examples is without corresponding pain; the loveliness being perfected by multiplied co-ordination, until it is so full of alternative, substitutive reminiscences that its disintegrations are *taken too small* to be amenable to the Law of Effectiveness, giving no uneasiness,—not even making themselves known; the repair of consciousness, and its full enlargement, going on absolutely.

exercise, in a present example, of all the faculties appealed to by an object,—a total unification by it of all the reminiscences of its class or type,—so that in its experience consciousness is at the full; the repair of the neurotic-diagram going on perfectly, the disintegrations it involves being taken so small, and yet so exactly, that while they give no pain, they furnish the maximum increment of ever-fresh pleasure; hope having become fulfilment;—the experience so far as it reaches giving absolute satisfaction. But the boundaries of that loveliness depend for their width and range upon the extent to which we have previously rationalised our experience and made it profitably reminiscent by a right adjustment of Attention,—that is, by constituting liberal, full co-ordinations, which mean high Taste. The final finishing touch is given by the actual instance bettering, surpassing reminiscence,—adding the realisation of an ideal.

This final truth, that Beauty, in its last best instances, is a happy totalisation of our consciousness of the whole of a kind in a single example of it, all the chief inquirers have in some way perceived, some holding it before them for a longer, some for a shorter time. It is what underlies the ancient doctrine that Pleasure signifies a perfect unimpeded display of energy; the statement that Beauty is the creature of custom can mean nothing else; it is

plain that this is what is really conveyed in the notion—so often repeated—of the realisation of type. Our own *Sir Joshua Reynolds came very near to it in his much derided assertion, that Beauty is a mean of extremes,—hazarding the brave Irishism, that if we were as much used to ugliness we should prefer it. To affirm that the widely-varying ideals of different races of men stand at the same level, custom brutally settling it by mere frequency of repeated impression, without reference to how far the national intellect and moral disposition enable the rationalisation of the experience, we have already argued is wrong. But the very fact of this huge caricaturing difference in types of Beauty shows that reminiscence is the power which is working at bottom; the merely numerical force of custom being able to override rationalisation, if the latter does not attain a certain stage.

These rules are at some points larger than the technical division adopted, but they needed explaining formally, leaving them ready to be applied to elucidate a variety of matters relating to the functions of Art. To go more into detail is not within the limits of these pages.

One further remark, however, remains to be offered as to what may be termed the principle of the operative-process in the branches of Art which are

professedly representative,—Painting and Sculpture. It is obvious that these cannot be fully mimetic. No painter, for instance, could hope to give actually in his work the multitudinousness of effect furnished by the simplest object or the rudest scene of Nature. Sculpture, at its completest finish, does not aim at mocking the breathing-flesh. On the other hand, great artists do not lay themselves open to the suspicion of restricting their efforts to a rendering of things under such conditions of far distance and a mixing up of particulars in a blurred way as would publicly confess this practical limitation. It is true, that, if you scrutinise the work too narrowly, you of necessity find that full detail is not attempted; but, if the wise craftsman stops short at some stage in copying rock-cleavage, wave-wrinkles, cloud-stains, the markings on petals, and the like, he does so in a manner which gives you the general results of which he obligatorily omits part of the means. Impressional-cues are so selectively-arranged as to challenge the specific reminiscence adequately.

Genius in these branches of Art, in fact, consists not in copying fully, but in reproducing mimetically as little as possible; so that by a miraculous sparingness of cues grouped collectively the whole effect of the object or scene is reawakened. In the successful instances, this is so adequately done that the absence of full detail never openly suggests itself.

It has, finally, to be added, that in so far as Art does rightly give detail realistically, or in any way render effects literally, it subserves a high educative function. This is owing to its enforcing attention to the simulated natural objects, through a specific representing of them with efficient disengagement of the ordinarily-occurring collateral distractions of their haphazard surroundings; the isolation of the object practically having the effect of giving to it a certain attractive slight freshness of aspect, which may be farther helped by the artist showing skillfulness of choice, or a happy knack of judicious arrangement. In this way, man comes, by means of the teachings of Art, to understand Nature herself better than he could possibly do without Art.

§ 4. Art as a Means of Culture.

The question may now be expressly asked, what is it that gives to high Art in all its forms the value of "culture" which is so rightly claimed for it? It may be answered that it is this,—that from the nature of the case, its instances directly affect the constituting of the inner, the egoistic neurotic-diagram. Always by it—the ultimate sense of the human fortune is in some way appealed to, and for doing this there are two modes,—either it is pretended by Art that the world is lighter, gayer, easier than it had before seemed, or we are arousingly challenged to be our-

selves nobler, larger, gigantic, in facing its difficulties.

Answering to this, the two extremes of Art are classified as Comedy and Tragedy. On both these topics something will be said later; at this point, we are dealing with the matter in a more elementary way.

It has been explained earlier, that larger sensory impressional-experiences give necessarily a more spacious physiological-actualisation of the Ego. Examples might be drawn from any of the senses: indeed, they have been given already in illustrating some of the previous subjects. In respect of form, mere scale in the proportions,—in colour, vividness of hue,—in music, the volume of sound, all touch us in this direct way of immediately framing favourable occasions for actualising our personality. But in order to secure popular recognition of the experiences as belonging to Art, there must be elaboration in the object, enrichment of the occasion, quickly and fully sustaining the egoistic-actualisation; and, owing to the limitations of operative-means, scale has usually to contract and submit itself to the necessary enforcement of what can be afforded.

Music, however, amply shows how selected large-impressions of a sense can magnificently challenge the Ego, and by only the most rudimentary and general reference to the efferent-activity support it continuously, through sheer multiplicity of the co-

ordinations brought into play. If the polariscope and the spectrum-apparatus could be extended in scale and be further varied in their effects, so as to supersede the present rude pyrotechny, the ocular-sense would discover capabilities in this way much beyond what is now imagined. In fact, any of the senses would do so, if their exercises, without requiring preparatory conditions and doings which are cumbersome, laborious, and otherwise involving disintegrations, could be made exactly repeatable at will; and, if punctually ceasing at desire, they did so wholly, like the aerial sounds, leaving no wreck and litter, no enduring consequences. Music connects with the only sense which can be thus perfectly manipulated. Its emotional charm has struck men as a great mystery. There appears to be no doubt whatever that it gets all the marvellous effects it has beyond the mere pleasing of the ear, from its random but multitudinous summonses of the efferent-activity, which at its vague challenges stirs unceasingly in faintly tumultuous irrelevancy. In this way, Music arouses aimlessly, but splendidly, the sheer, as yet unfulfilled, potentiality within us.

That is, in fact, Art's great function,—to rehearse within us greater egoistic-possibilities, to habituate us to larger actualisations of personality in a rudimentary manner. In theory, though for the reasons above mentioned there are limitations in practice,

it might propose to use any of the senses for the purpose.

But we are not wholly debarred from conjunction of sense-appeals, and in those special cases the artistic effect heightens and deepens. A man may hear music with the vaulted roof of a cathedral over his head, and all around him the hues of richly-blazoned windows, some of the glowing lights falling upon stately sculpture; or, if it be open to him to cross the threshold of a palace, he may stand amidst galleried-and-vistaed spaces, marble gleaming on all sides, with befitting purple showing here-and-there faint foreign perfumes scenting the plentiful sunlight. When these completer enchantments of the senses thrill any one with heroic wishes, let him bend his head in reverence of heart; and, if he finds the mood strangely akin to that he has felt when beholding the sea at sun-setting, or in gazing on mountains when the dawn was rising, or during the broad day upon finding himself alone in the solemn woods, he will, perhaps, think that Nature and Art really used the same spell,—that of large and happy sense-impressions.

§ 5. *Symbolism in Art.*

In what has just been said, Art has been spoken of in its plain literal style. But it is possible to use sensory-impressions systematised con-

ventionally as the means of what is called Art symbolism; colours, attitudes, etc., being made cues of the definite ideas and the related feelings belonging to man's higher modes of consciousness. A compendious management of Attention is in this way possible, and, by securing the wide physiological basis of a large sensory-impression in any one of the organic kinds, a speedier constitution of the egoistic-actualisation may be got in some of its first lowest, rudimentary spiritual stages. But it seems likely (as is hinted above), also, that the higher-elaborations of the consciousness must be hindered in just the same proportion as this initial facility is given, owing to a part of the nervous-apparatus being detained acting in a massed way in the rudest mode; so injuriously affecting the inter-associations of the other senses with itself, and it with them, in the higher sentiency which it would be capable of helping to render if a smaller cue of actual sensory-impression challenging the literal, peripherally-acting mode had sufficed.

This is saying, in other words, that the superior sentiency must increasingly look to Literature (including oratory) for its suggestions, since it, and it alone, can progressively reduce the merely sensory-cues to the extent which may be found practically to be sufficient. But this inquiry into symbolism transcends the proper boundaries of Art unless the

term is first itself made metaphorical. Towards the finish of the chapter, a further remark is added on the point.

§ 6. *The Place of Literature in Art.*

But Literature—reckoning as belonging to it oratory and the Drama—belongs to Art, putting aside its direct, intelligible, definite appeals to Conduct. The special charm of poetry is easily understood, and is clearly seen to be artistic in character, when it is remembered that in the music of its rhyme or its rhythm it secures a direct, prompt, full actualisation of the Ego by means of a series of sensory-impressions,—the auricular ones. Set the words to music and you enlarge this Art function in respect of them still further. But for the reason suggested just above in dealing with the question of symbolism, the more you enlarge the sensory-impressions, the more you hinder the higher mental experiences. Indeed, philosophical and didactic poetry has greatly to lay aside rhyme, neither requiring nor being able to afford more than the accompaniment of rhythm; it is only the humbler kinds of verbal composition that gain from jingling; and if musical notes are to be added to words, the words ought not to have very much sense in them, or they must, at least, be kept very simple. Literature, however, not only is itself Art, but it is the great popular

substitute of all other Art, by virtue of words being reminiscently representative of sense-impressions of all kinds; and, further, it completely ekes out the deficiency in operative-means which we spoke of as limiting the scale of other kinds of Art.

It is a poet's own fault if he stops short too soon when the architecture is only verbal: his fountains may flash forth cascades as inexpensively as if they sputtered drops. Why should he spare in gilding when a phrase can give the gold? The sculpture may well abound since it is only syllabic. Words are available if not for all mimetic ends, for most of them; they are stained with colours, and they naturally give forth music. Writing, in fact, stands for all else,—is every Art in one. And all the palaces in books have open doors through which even beggars may enter unobstructed. It may well be so, for no matter how great the throng, the steps are never worn, and the crowd does not jostle. Painting, in part, competes with Literature in this representative function. In landscape it excels verbal description naturally, since the picture revives the original impression immediately, not by secondary association as words can only do, and the magical canvas may even give the scene more compendiously than actual observation of reality. To maintain its superiority as to figure presentation and historical or imaginative grouping, Literature has to make recourse

to the Drama, which is, in reality, to ask pictorial aid itself. But Literature, even at this lower level, is the final Art. Claiming words, it alone can use multi-formity of associations; it can in a phrase mix the cues for starting several senses. It has been contended that a sentence may faintly suggest perfume, as well as hint form and colour fully, adding melody for its own peculiar gift. Language, moreover, goes on softening, enriching, perfecting itself; every poetical genius, by some new happier knack of use, leaves it more bright and flexible.

A phraseology of epithets is, indeed, forming surely if slowly, which will make Literature more-and-more avail for the substitution of natural objects in all their aspects now represented singly by the other separate Arts. Its higher didactic uses, in which Conduct is directly appealed to, the egoistic-diagram being constructed in the loftier styles by the challenging through its means of metaphorical consciousness, have been spoken of in earlier passages. Some further comments on Language in this highest employment of it are added in the concluding chapter.

§ 7. The Connection between Art and Morality.

The question has long been disputed, whether Art has any connection with Morality, some of the most authoritative latest affirmations being that it has not.

Above it is stated, that Art always stirs the ultimate sense of the human fortune, by either pretending that the world is lighter, gayer, easier, than it had before seemed, or by arousingly challenging us ourselves to be nobler, larger, gigantic, in facing its difficulties. In both these cases, though in different ways, what is vitally concerned is the efferent-activity. But, before following up that hint, there is one intermediary aspect of the subject yet remaining to be dealt with.

For this point we reserved what had to be said on the topic of Humour. In treating of Art, laughter cannot be omitted. Humour mixes more-or-less with a good deal of what we have been speaking of, and for some men it is, in fact, nearly the whole of Art, or, at least, it substitutes Art for them. The Comic seems to borrow in its own queer way from both the realms just mentioned. It is true, it must not present the world as really gay and light, having the appearance of being wholly trivial,—that would give no comicality at all; on the other hand, its rough catastrophes must not fully challenge right sympathetic-activity in us. This is saying, that, while comicality apes seriousness, it must really be without permanent ill consequences. Both the above Art functions are in Humour essayed together, but are transposed in the fulfilling, and so are alike more-or-less nullified, though not before much gratification has been had. In Humour, we

have, in fact, a burlesque appeal to the sense of human fortune, making of it nothing but fun ; doing this by means of sheer blunder, stupidity, and mis-carriage. The reason of the perennial popular charm of Humour is at once seen when this is remembered, —it lies in comicality utterly resting the ordinary efferent-activity and relaxing the strain of every sensory co-ordination. Comedy, taken in the broad meaning, asks for its full success even moderate ugliness in the persons most concerned in it, with awkwardness of gesture, inexact speech, irrelevancy of doing. But this is exactly the same in effect as the eye, ear, etc., only half-attending ; the first rude infantile groupings of the sense-activities again become sufficient, easing all the laboured additions of the later acquired co-ordinations : and, further, in spite of a great bustle and pother,—for this there must be the show of,—there is nothing to be done but to sit still and behold. The easily-afforded energy which is stirred by the first cues of this make-believe, bubbles away in laughter ; the man finding himself perfectly efficient without an effort, for all obligation of duty is given up. Is it wonderful that most men like it ?

Especially will Humour, if it be only coarse enough, commend itself to the little-cultured, though the polished will be able still more to enjoy moderated instances of it if they have been over-strained in serious efforts sufficiently to make it acceptable at all.

With children, again, reserving flowers, dancing, and a certain region of tinsel, most of their Art is only farce, and the promptness of their laughter at grotesquerie and all rough antics is fully accounted for when we remember how vigorously they use their own limbs, and the over-stress they are nearly always subject to when not being amused; at almost all other times they are engaged in enlarging the nervous co-ordinations. To be suddenly absolved from this, and to be restored to their own still earlier world of partial-observations and defective, unfinished movements, titillates them in proportion to the recentness with which they have outgrown it. So, too, the continual danger to which broad humour is exposed of sinking below the limit of good taste is explained: in its going backward-and-ever-backward searching for these rude, earlier, incomplete and therefore easing co-ordinations, it does not know where to stop. But let us return a little, and state the matter more generally. Wherever there is laughter, it will be found (as was pointed out very early in this inquiry) that the efferent-activity has been stirred, and then, its direction being checked and made aimless, the energy has to escape in that mode; that is, on every occasion when laughter is moved, there would be something obligatory to be done if the circumstances were not prevented from having the real results to which they at first seem to point. This explanation of the process of

laughter was given by Mr. Spencer long since. Wit rises into a higher realm, disclosing an intellectual ideal, and entering the Art region proper, but if in the case of a witticism we go beyond the smile politely due to it and laugh, it is because the rudeness, real or assumed, at the bottom of the remark is so managed that it need not be resented. A good pun is amusing only from its starting the energy belonging to two mental conceptions, and the excess has to explode in laughter.

However, the main secret of Humour is betrayed when the fact is noted that it deals with the present, the familiar, or that which has only just ceased to be most frequent. From Aristophanes down to the last writer in *Punch*, humourists find their favourite materials in the news of the day. Fun's special function lies in a partial presentation of the best-known, the most ostentatiously challenging objects,—in a word, in caricature. Art, in a certain sense, may be affirmed of Humour, but the sense is a very low one; any skill which may be shown in the arranging of farce is not itself farcical, but gets its merit on wholly different grounds; and, in the same way, when comedy rises into elegance, in entitling itself to be ranked highly as Art, it ceases to be broad humour. The latter does not in any set way seek specially to rest some of the co-ordinations by entire diversion of the attention, nor does it enlarge

the co-ordinations it uses at any point, as high Art does, but it snatches a boisterous, only hap-hazardly refreshing relaxation by using bits-and-patches of the common co-ordinations. Satire may fairly employ it as an instrument; it is its rightful indispensable weapon, when those common co-ordinations have themselves become too artificial and need simplifying; but, if Satire is in part humorous, it must, also, show a good deal besides Humour.

The practical questions of morals which arise in connection with Humour,—the due observance of decency, the exercise of right judgment as to the times and places for its introduction, and the limits of frequency in its use,—are no part of the debate as to whether there is any connection between Art and Morality. To that larger point we now return.

Humour, we have seen, apart from the above-mentioned incidental considerations, makes no set appeal at all to the efferent-activity; it neither presents the world as gayer or lighter than it is, nor challenges us to be nobler in facing its difficulties. Pretending catastrophes, it merely turns them into unreality, and so gets fun. But, when inquiring into Conduct, we saw that morality has no meaning irrespective of some positive and precise reference to the efferent-activity. The question now in hand is therefore really this,—whether Art can injuriously affect us on that practical side?

Those who contend that it cannot, must mean, at bottom, that fine Art should not, and will not, ever be definitely practical,—that its office is merely to rehearse the large conditioning of personality in men hypothetically, irrespective of precisely-fulfilled occasion. With that qualification, they are right, only a stringent criticism is necessary as to what true Art is, so showing where its limits end. If in the first of its two above-named functions, it presents the world to us as gay and bright, a restful, repairing, nourishing pause is given to the efferent-activity, but pleasant as the bulking of the consciousness is in that moment of slackening of effort, the Ego will begin to dwindle in its actualisation if the triviality become habitual. But there are the other controversialists, those who assert that to exercise the Emotions in the way of the second function of Art by means of romantic literature and theatrical spectacle enfeebles the sympathies, and gives a distaste for the actual scenes of life. These really mean that the efferent-activity is deteriorated in another way, that of dissipation. In the one case, it is laid asleep, and sinks into a torpor of disuse,—in the other, it is frittered into a morbid feverishness by vivid, definite challenges which cannot be fulfilled, the checkings and bafflings bringing on practical incapability.

It may be argued that in each instance, the Art which works such effects is not true Art,—that before

Art can effeminate it must become petty, before it can make us morbid it must descend to gross realism. Undoubtedly, so long as Art keeps the sense-impressions on which it relies large and noble, and does not carry them into such grouped-detail as to give precise cues to the efferent-impulses, the question of morality has no relevancy to it. Its true purpose is then seen clear and full,—that of habituating us to larger living by fragmentary exercises of the actualising-process on a scale more magnificent than the previous practical experiences. But, for this, the inflations of the personality must be general; the Art inspiration must be left broad and anonymous, to be allotted definitely hereafter in some way of Conduct. The efferent-activity must preserve its own real reminiscences intact; Art, or what passes for it, cannot touch those without killing them. Nor can Art itself be saved from its own corruption but by timely periodical infusions of the Sublime.

This necessarily takes the thoughts back to Tragedy. Its characteristic is to carry the appeal to the efferent-activity by means of noble, selected sensory-presentation to the utmost limit of safety, so enlarging the habituations till they reach the very bounds of Conduct. But, as above hinted, it must, under a frightful penalty of risk, stop short of actually grouping the practical-cues. If by gross realism

it does that, morbidness is the result; on the other side of that line there is a region of fair rich use for Tragedy.

§ 8. Some Respects in which Physical Science will Substitute Art.

Earlier, a brief allusion was made to the manner in which Physical Science may in part come to subserve some of the needs of the second function of Art,—that which gives trivial exercises of the attention. Among the surprises of that minuter world about us which has been revealed by the microscope are some so grotesque as almost to suggest that it may be in the scheme of things for infinitesimal comedies to be hidden from the ordinary vision in order to be kept fresh as a store of light, wondering, gay interest, available for recreation at any moment by lifting the veil. Myriads of microscopic mimes are always performing, ready for man's least glance. At present, the possibility is hindered spoilingly by the too formal associations of the apparatus, and the process of such artificial observing challenges the intellect fatiguingly. But, as time goes on, generations will succeed with whom that stress will lighten. It would be a style of amusement falling fittingly in the way of an intelligent creature.

So, again,—as also was earlier hinted,—it is pos-

sible that when familiarity with the processes has made them undisturbing mentally, the polariscope, the spectrum, and some chemical effects, may better substitute the present tawdry gilding and pasteboard-ornamentation of public holiday scenes.

In the meantime, there is certainly growing up a large mood of easier commonplace consciousness, got from the marvellous achievements of practical Science in its general improvement of the world. The modern aggrandisement of the idea of our species, resulting from the engineering triumphs and the increased facilities of locomotion by land and sea, is itself intoxicating, and favours all the more detailed Art effects. In ancient eras there was, except at special times, and in favoured places, a strongly anti-Art mood fostered by the sense of the world being too large, too hard, too inhospitable for men. As the race feels that it has mastered the mundane distances and heights and depths, men becoming true lords of their dwelling-place, an auspicious predisposition to a more courageous versatility of egoistic-experience will come. Further, there is one department of Science,—that of Astronomy,—which from its association with a noble set of sensory-impressions, the ocular ones, in the glories of suns, stars, planets, and moons, clearly offers itself in an Art character. For besides this pictorial aspect, the scale of the distances, sizes,

velocities, etc., that Astronomy discloses, makes a direct appeal in a rudimentary way to the efferent-activities. Some of the other Sciences—Electricity, Light, Chemistry, etc.—are also getting something of this last effect.

It is certain that Science in many ways will liberalise Art progressively, unceasingly, and that it will in the end substitute some of the ruder modes at present in use.

§ 9. *The Final Defectiveness of Art in Comparison with Conduct.*

The meaning of the last remark really is, that the old style of merely ornamental and luxurious Art may be in some degree finally superseded. Anyone can see that such a reduction of the needs of the case would be a great gain to man. For the ultimate observation to be made respecting that old style of Art is this, that although Art, using the word with that understood limitation and reserving Literature, is able to give prompt, large actualisations of the Ego at an easy low level of untransformed, or very little transformed, sensory-experience, yet, apart from the provisional uses we have spoken of, viz., filling up empty spaces in life, restfully alternating Attention, etc., none of these egoistic-actualisations can be estimated as of much intrinsic value. They only occupy the intervals between man's

better living. Not only cannot Art give the very highest complexities of sentiency, substituting the egoistic-actualisations which are rendered by Conduct, but, at the times it is having sway, it must preclude those by a preoccupation of the apparatus peripherally. The nervous-system has to work the other way—from the interior—in all heightenings of character. As compared with Conduct, Art has small subtlety, little intricacy of inter-appeal to the consciousness, but only masses some simpler forms of sentiency; it necessarily offers no reality answering to that of personal relationships stirred by practical doing.

It is owing to this deficiency that many men seeking after what is termed spirituality are prompted so greatly to dispense with Art; though, let us hasten to add, if they neglect it wholly, they do so at the risk of becoming narrow from sheer lack of the larger-habituations of the nervous-apparatus which it gives,—these being always needed at some points; but it should be further added, with equal haste, that, in the contrary way, you may have only effeminate dandyism of soul along with idolatry of Art. The highest service that Art can render, we repeat, is to fragmentarily exercise the Ego-actualising apparatus, preparing larger-habituations in its use for Conduct. So soon as it ceases practically to be a means for this, and comes to be treated as an end in

itself, the corruption of Art has set in, there lying before it all possible depths of degradation. But in the ways above specified the danger now lessens.

Already life is less liable to stale from vacancy; alternations of Attention progressively offer in easier, better order; and if Physical Science, when modern ideas are completely organised, should give back Faith to man, its exercises will challenge his emotions prospectively by a reaching-forward in Adoration,—which might almost be called a final, sublimated style of Art, arising out of Conduct itself, rehearsing in inexplicable ways efferent activities not belonging to this life. .

CHAPTER XXII.

CONCLUSION.

§ 1. *A Retrospective Glance at the Inquiry.*

THE limits fixed for this task being reached, it is only now that a glance backward fully shows the defects in the execution of it. To give to the work formal completeness, several great additions would need making to it.

Full details, so far as they are known, ought to be given of the physiology of the sense-organs and of the nervo-cerebral system generally; then, a compendium, at least, is asked of the history of philosophical thinking in connection with the chief questions treated, including criticism of prior doctrines to the extent of defining the specific reasons for which any of them is dissented from. The materials for both these purposes necessarily were largely obtained in the course of the studies, and it asks a little self-denial not to use them; but such inclusiveness of plan and performance could not be secured without largely increasing the bulk of the

volume. And the question, besides, arose whether such an attempt at formal exhaustiveness within the covers of one book was imperative?

What has down to the present been learned from Anatomy of the Nervous System has been popularly stated by Dr. L. Beale, Professor Ferrier, Mr. Lewes, Dr. Carpenter, Professor Bain, and others. It is very likely that the reader will be more-or-less familiar with their pages. At first sight, too, it would seem possible to say, that, for the special purposes of the present treatise every end is answered by its starting physiologically at the point where the Neurotic-Diagram is constituted effectively for the conditioning of consciousness,—note being taken of the practical connection between the diagram's modifications and the vicissitudes in consciousness. The more fundamental physiology, it might be urged, does but trace the earlier stages of the nervous-activities giving that conditioning; and though Science must not overlook any of them, it is obvious that none of the phenomena of experience—as they are capable of being dealt with by Philosophy—arise prior to the moment when the assumed Law of Effectiveness comes into play. The writer, however, sees the need rather of insisting that for the clear apprehension of that very Law a knowledge of the physiological-operations below its range is indispensable, in order to define in a way

of clear apprehension the point where it commences to operate. It is, consequently, a duty to warn any beginner in psychological studies, that these pages are to be regarded as incomplete to that extent.

No one can any more be encouraged to dream of philosophising without knowing all that Science can teach them as to processes, if not in detail, at least in seriated generalisations; and it has, indeed, been the main object of this book to show by an unshrinking adoption of the modern physiological-discoveries, exactly how largely human experience is matter of process in modes of which Science can take note, and how it further can teach us in many ways advantageously to manipulate the conditioning of the lower forms of consciousness.

But a third omission has to be named. What has been just said relates to the individual under his immediate, we might almost say, his isolated aspect; looking at man socially, from the point of view of the collective-experience which in that manner arises, a further great deficiency in this work becomes apparent. For completeness here, a history and a criticism would have to be added of social customs and institutions, ranging from primæval usages down to modern politics. Several times in the preceding chapters this third gigantic requirement came into view, and any professed attempt at it was necessarily at once set aside. The conception of the task in

the manner of a fully-elaborated idea of it, yet carries some newness about it, and even the rough materials for its execution have not been quite adequately accumulated. But here again what it is so far possible to attempt, may be said to have been done in the high theoretic method by Comte in France, and still more solidly by Mr. Spencer in England; not forgetting among our own writers the helpful preparatory labours of a large band of students.

However, the class of readers who have been chiefly in view during the writing of this book will, as a rule, be likely to be informed on this third point, as well as upon the other two.

Still another falling-short ought not to be left unmentioned. The investigations falling under the head of Metaphysics are in this treatise left in a rather halting condition. They are not pushed nearly far enough. It is hoped, however, keeping the survey within the narrower bounds proposed at the outset, that the sketch given in the preface has been fulfilled. In place of reproducing that plan here as a summary of the chapters, the reader is desired to refer to those earlier pages, altering the tense there used.

One further remark suggests itself as to the way in which the attempts at exposition of the higher phenomena of consciousness were throughout hampered by certain shortcomings in Language.

§ 2. *The Modern Obscuring of Spiritual Significance in Words.*

For the very highest events of consciousness, we have no immediate, directly appropriate names; that style of experience can only be hinted at in terms belonging to the senses and the intellect. This, of course, was always so, but of late the newly-framed scientific ideas have been competing with the spiritual sentiency for the figurative use of sensory phrases.

One reason, we may suppose, why in certain races earlier men seem to have had more fluency and greater adequacy of expression in these higher matters, was that they could, by a secondary act of Attention, use sensory terms in a clearly understood *representative* manner. Prior to the scientific epoch, in calling the soul breath, men would have no difficulty in keeping themselves aware that the word meant something more than air passing out of the nostrils. But on reaching a specific stage of the modern scientific subtilisation of the primitive terms, their symbolical character is perplexed by a further explicatory demand being made upon them, which though really only a heightening in degree,—not a change in kind of signification,—appropriates the old second act of Attention in respect of the word. Physiological-processes and the operations of physical laws are now suggested behind the

plainly observed outer events by the phrases which are descriptive of the latter. A third act and stretch of Attention is, in fact, now required to maintain in effective use the ancient parabolical spiritual associations of the words. This habit has yet largely to be acquired.

Hope, however, in this matter of Language lies in the very technicality of Science. Human speech, as is hinted in an earlier place, is gradually acquiring a stock of terms which are nearly without primitive sensory-meanings. These, in time, may become available as metaphorical language for the spiritual experience, giving to it a superior articulateness. Energy, Force, dynamical, kinetic, etc., are all words with a root of intellectual figurative-signification in them higher in rank than the old similetic phrases. Men must wait a little yet for them to flower fully into this final meaning. In the meantime, it is the most obvious need to recollect habitually that we have not, never had, nor can possibly have, quite adequate phraseology in which directly to express spiritual-experiences.

A high, most economical use develops out of that very defect; it seems to ensure that the ultimate spiritual-sentienty shall in great part in each case be original, individual, fresh from this inescapable privacy of it. But, as we have said, by-and-by, something of the more perfect modern access of

dumbness will be lifted; Science promising to give man a larger dialect in which to convey spiritual hints.

It will then be so much the happier for those writing on these subjects.

APPENDIX.

A.

ANCIENT AND MODERN THEORIES AS TO PLEASURE
AND PAIN.

(See the end of Chapter III., p. 86.)

A MERELY chronological catalogue, with names of authors, of the theories which have been put forward to explain Pleasure and Pain, and of the related doctrine of Beauty in each case necessarily arising out of the theory, would not be found very profitable by the general reader. The better course will be to classify the speculations. That will indicate more clearly how far the possibilities of hypothesis seem to have been exhausted as to the topics. For convenience sake, we may in some of the instances use the term Beauty as if it were conterminous with Pleasure ; for though it is not, yet the view which the writers applied to the one class of phenomena gives their doctrine as to the other ; and some thinkers are far more explicit in speaking of Beauty than when treating of Pleasure.

It has been held, then, (1) that there is an absolute inexplicable quality in things which are pleasing,—this quality being appreciable by a special faculty or faculties in us ; (2) that Beauty is owing to the approximate realisation in the things having it of the archetypal aims and purposes of the Divine Mind ; (3) that Pleasure arises from

our becoming aware of our own perfections, the objects and occasions which are pleasing merely giving opportunities for self-disclosure and self-appreciation on our part; (4) that Pleasure is the accompaniment of a free act of unimpeded energy in us; (5) that Pleasure means a relaxation of the nervous system by means of smoothness, gradual variation, etc., in the things making impressions; (6) that Pleasure may be said to be negatively conditioned, being the result, not of any real qualities in things or in ourselves, but arising from a certain order of *succession* of experiences, some objects or actions relieving the wants caused by others,—Pain always preceding Pleasure, and its removal affording the enjoyment; (7) that Beauty consists in the perception of relation in a thing to other things; (8) that Beauty is not so much a phenomenon arising in respect of a single object as of a multiplicity of sensations or feelings, either in the way of actual current impressions or of associated reminiscences needing to be recalled in order to constitute the experience; (9) that Beauty is the creature of emotion; (10) that Beauty is attributable to the things showing it having a mystical relationship with the whole—that is, with the Infinite; (11) that Material Beauty is an illusion, being due to the perception in-and-through the pleasing object of certain moral and intellectual qualities,—order, means-and-end, a maker, etc.; (12) that a thing is Beautiful by virtue of its fulfilling certain rules to which technical names may be given, such as variety, unity, contrast, proportion, etc.; (13) that Beauty is apprehended by an act of judgment assuring us of the realisation in the example before us of the ideal type disclosed in its class; (14) that Beauty is the free realisation of the Absolute Idea; (15) that Pleasure is owing to the objects or actions giving it having a natural power of heightening the vital activity

of the organism,—a sort of mimicry of right pleasure even being possible by artificial stimulation of the nervous system, at the expense of reaction afterwards.

This magnificent pile of speculations, which, indeed, forms one of the eternal monuments of the human mind, has been slowly reared in the course of ages by every leading thinker of each period adding to it his stone. It is obvious that a number of these theories overlap more-or-less; an ultimate analysis would show some of them running at this-and-that point into more than one other; and, as might have been expected, some thinkers have avowedly put forward more than one hypothesis. In making the following rough historical allotment of names I have to beg the reader who is thoroughly inquiring into the questions to qualify the list for himself in that more minute way by reference to the works cited. For example, Plato would need mentioning a third time, in conjunction with Aristotle, as having held like him that Pleasure means harmonious energy, Pain a want of harmony.

THEORY I.—(Under the head of Theory I. all inquirers, ancient and modern, would have somehow to be named, that is, with one qualification or another. They all are driven to admit some degree of inexplicable Beauty in the things themselves, which is apprehended by us in a way of which they, at the last stage, attempt little or no account. The distinctions which would have to be made among them are as to the points at which they bring in another element. Some do so earlier, some later. Thus, among the moderns, Hutcheson allows what he calls a free absolute beauty in pleasures, etc., without detracting from its absoluteness; while Alison diminishes to a mere germ the Beauty he concedes to simple objects prior to Association of Ideas coming into play. It would hardly

serve any purpose to give individual names under this head.)

THEORY II.—Plato,¹ Plotinus,² St. Augustine,³ Schelling,⁴ Victor Cousin,⁵ Ruskin.⁶

THEORY III.—Descartes,⁷ Leibnitz,⁸ Wolf.⁹

THEORY IV.—Aristotle,¹⁰ Sulzer,¹¹ Paley,¹² Sir W. Hamilton.¹³

THEORY V.—Burke.¹⁴

THEORY VI.—Plato,¹⁵ Kant,¹⁶ Leibnitz.¹⁷

THEORY VII.—Diderot,¹⁸ Baumgarten.¹⁹

THEORY VIII.—Alison,²⁰ Stewart,²¹ Lord Jeffrey,²² James Mill,^{23*} Bain.²⁴

THEORY IX.—Sir J. Reynolds,²⁵ Father Buffier.²⁶

THEORY X.—V. Cousin,²⁷ Emerson.²⁸

THEORY XI.—Reid,²⁹ Cousin.³⁰

THEORY XII.—(Here, again, as in the case of Theory I, it is useless attempting any list of names. All speculators upon these topics admit some principles of this abstract kind, giving to them more or less of value in their teaching; ranging from Aristotle's unity and variety down through Hogarth's roughly allotted line of beauty ("Analysis of Beauty") to D. R. Hay's arithmetical and geometrical calculations of definite proportions ("Science of Beauty").

¹ Phileb., Republic lib. 9, Phæd.; Gor. ² Enn. 1 and v.-lib. 1. ³ De Civit. Dei, x. 3; De Vera Religione, c. 55. ⁴ Über das Verhältniss der Bildenden Künste zu der Natur; System des Transcendentalen Idealismus. ⁵ Du Vrai et du Beau et du Bien. ⁶ Modern Painters, vol. ii.

⁷ Principia Philosophiae; Compendium Musicæ; Lettres, p. vi. ⁸ Les Nouveaux Essais, lib. ii. ⁹ Philosophica Moralis, etc.

¹⁰ Nicomach. Ethics, libs. vii., viii. ¹¹ Theorie der Angenehmen und Unangenehmen Empfindungen. ¹² Moral Philosophy—on Human Happiness. ¹³ Lectures (Metaphysics), vol. ii.

¹⁴ Essay on the Sublime and Beautiful, p. 4, s. 19.

* Mr. J. S. Mill adopted his father's views on these matters.

THEORY XIII.—Levèque,³¹ Jouffroy,³² Garnier.³³

THEORY XIV.—Hegel.³⁴

THEORY XV.—Bain,³⁵ Herbert Spencer.³⁶

³¹ V. supra cit. ³² Kritik der Urtheilskraft; Anthropologie. ³³ V. supra cit.

³⁴ Article "Le Beau" in French Encyclopædia. ³⁵ *Æsthetica.*

³⁶ Essays on Taste, etc. ³⁷ Philosophical Essays, p. ii. ³⁸ Essay on Beauty. ³⁹ Analysis of the Human Mind, vol. ii. ⁴⁰ The Emotions and the Will; The Senses and the Intellect.

⁴¹ Letter to the *Idler*, No. 82; Discourses, iii. ⁴² *Elementa de Méta-*
phisisque.

⁴³ V. supra cit. ⁴⁴ *Nature.*

⁴⁵ Essays on Intellectual Powers. ⁴⁶ V. supra cit.

⁴⁷ Science du Beau. ⁴⁸ Cours d'Esthetique. ⁴⁹ Facultés de l'Ame

⁵⁰ Vorlesungen über die *Æsthetik.*

⁵¹ V. supra cit.. ⁵² Principles of Psychology.

B

PHYSICAL SCIENCE AND PRAYER.

(See *Chapter XVI.*, p. 473).

THE views put forward in the chapters on "Will," "Conscience," "Conduct," etc., bear directly on the question of Prayer. If they are accepted they make necessary a recalculation of the rational limits of expecting the fulfilment of petitions. It may be well, first of all, to restate the position in which the question controversially stands as it is left by the reasoning in those chapters.

The holders of the Christian doctrine of grace affirm that there are from time-to-time additions of Energy granted to the human being, viz., at the moments of a man's aspiring rightly in the mystical realm of the Ego; on the other hand, modern scientific inquirers allege that this would necessarily amount to a progressive increase in the world of the sum-total of Force or Matter, this naturally resulting from the cumulation of such increments of Energy;—adding that their calculations and inferences give no trace of any such increase of Energy operating in the physical world. *

This clearly is an objection which it is within the proper province of Science to raise,—it is one which it is its duty to urge as far as it can. True, before the objection can be pushed finally to a logical triumph, Science has

to make out, as was earlier stated, that its analysis is perfect enough, not only to ascertain whether or not there is a necessary tendency to a process of abatement of dynamical-operation in the mundane system (for this it claims to have done), but, further, that it is able in some way of approximation—however roughly—to estimate the additions of Energy which the alleged answers to Prayer would imply, and, finally, on the basis of that estimate, to say that such additions are not small enough to be masked by acting merely as retardations of the natural abatement of the mundane dynamics. To these points we will return, but it is desirable at this earliest stage to secure its being made clearly apparent what the argument on the part of Science, nakedly stated, is. Put into few words, we may express it thus,—

That it has been mathematically demonstrated that any arrest, alteration, or extra occurrence of a physical process necessarily implies increase of Energy, and ultimately, of mass of Matter in the world. Religious men who have even elementary scientific knowledge will recognise the cogency of this reasoning. It does indeed seem impossible, unless some fundamental modification of view can be made as to the Energy itself, for us to suppose the sequentially-proceeding physical operations of Nature to be at any point changed in either of the above-mentioned modes excepting by the *addition* of Force; any conceivable alteration in the prior order of atoms, centres of Force, or elemental activities, reckoned in any terms of Motion, must, in fact, have the effect of *increasing the sum-total*.

This is the preliminary logical hypothesis which Science puts forward as a bar to the feasibility of Prayer; what counter theory can Christian apologists urge on their side?

They, at first sight, seem to have two courses open to them. It would appear that they might, as just above hinted, fundamentally demur to the scientist's conception of the Cosmical Energy and its mode, retorting upon him the admitted paradox of Motion, and alleging that even physical-operation in the act of Causation takes on a mysterious style, in respect of which it is conceivable,—accepting a suggestion from the sense of Will in man,—that at every such moment there comes into play a potentiality of modifying quantity of dynamical effect, either by addition or diminution without the above specific necessity; the fact that such modification of the scientifically-apprehended necessity of the case does not occur ordinarily being made intelligible to us on a reasonable ground, that, namely, of the uncertainty which would result interfering with the prearranged working of the system, indispensable for affording the opportunity proper to the human intellect, and necessary to the general mode of the experience allotted to the inhabitants of this world.

This is the first line that seems open to the Christian controversialist. Obviously, it converts all Causation into a possibility of miracle. Before stating the express scientific objection to the hypothesis, let us interpose one or two remarks. In following it out, the apologist would have to admit that a great part of the latter portion of his argumentation rests upon the assumed principle of Final Causes. The scientific man would on his part, plead that this doctrine is based on a pure assumption, and belongs to a class of ideas which has been generally discredited by the results of his researches into the operative-course of Nature; but while it follows from the very nature of the position taken by the Christian arguer, that this retort would fail with him, the scientis

would have, in some way, to admit the paradox of Motion,—the mystery of Causation,—and the illusion of Will in the human creature. In the region of merely hypothetical reasoning, those puzzles appear to tell in some vague way of presumption against the scientist, leaving him to fall back upon such practical facts as he can collect and verify. His present mode of escape from that logical disadvantage is simply to refuse hypothetical reasoning of this kind, declining to meddle with the above paradox and its associated mysteries. All that the Christian, on his side, can do is to plead that this is an unnecessary restriction of the egoistic-actualisation. If, however, the Christian is entitled to insist that those facts which the scientist leaves out are actual features of the world, and to plead that he is justified in trying to the uttermost to find out any significance they have,—since they may be the very opportunities for challenging a further evolution of faculty in man,—the scientist is not debarred from urging that the human mind, as it is now conditioned, is forced to conclude against any *general* rectification of the world by the annihilation periodically in any wholesale way of quantities of Force answering to a totalised-sum of the increments individually made in fulfilment of Prayer; since it is not conceivable that a withdrawal of Force at any other point of the concatenation of executive-operation than that where the modification of structure in fulfilment of a petition took place could happen without re-alteration of the structuralisation at that other point also, and throughout the whole series between;—which would, in fact, be a duplication of the interference, and the addition of another result in some way of modification, not afterwards withdrawable in the way the Christian can suggest as to the first effect, as will be pointed out directly. The reader will begin to

perceive where the final scientific objection to the theory touches it.

In a word, this first hypothesis assumes what may be described as *a substitutory manipulation of Causation* within the limits of the precise situation where the modification of structure takes effect, the different result being secured in the moment of the transformation of phenomena, when Energy relapses, so to speak, into potentiality ; that is, during the inscrutable operating of the causation, as it is acting in the paradoxical manner which is indicated, rather than described, by the word Motion. But (and this is the telling objection) the result operated, no matter what substitutory manipulation might take place in the causative-process, *must not vary the prior statical quantity*, or else the general situation outside the limits of the specific case would be affected in a way of increase of Energy as is above pointed out. *And it is seemingly impossible to conceive any answer to Prayer which would not alter the statics of the situation.*

So far as to the first controversial position which it appeared to be possible for the Christian apologist to take up, but he has, also, another line of arguing open to him. He may say that his general hypothesis avowedly does not confine him to this world, and that if the scientist, as far as matter of fact goes, is right, and that there must be a specific quantitative addition made to the totality of Force whenever a prayer is fulfilled, there still remain conceivable a number of cases in which Prayer might be answered, and such increase not be traceable here owing to the minute mystically-obtained additions of Energy taking effect constructively within man's apparatus, forming there a nucleus of organisation available for a future wider existence on his part, this nucleus being withdrawn from the mundane system at the death of the individual,—the effects of such

added activity during the lifetime being only to compensate to the extent of their kinetic value an unallowed-for portion of the very slackening of dynamical-operation in the mundane system which the scientists claim generally to have demonstrated ; provision being made in the natural relations of this special system with other realms of the universe for the withdrawal of these subtler organisations on the dissolution of the present human body, that arrangement causing the heightening of the sum-total of Energy finally to tell not in this world, but elsewhere, being in fact the mode in which the material creation is kept perpetually going forward. A further remark, however, has to be added. Since no actual addition of Energy can be made without alteration of statics, the additions here spoken of would have to be so small as not to tell *practically* on the general arrangement. This latter, in fact, must exhibit a working-margin of minute variability, the vicissitudes in which do not tell to an extent which is apprehended by us in the way we call practical. Chapter XI. inquires into this question of the size and frequency of the gratuitous increments of Energy implied.

In reply, it may, on the other hand, again be affirmed by the anti-theologian that this second hypothesis is but a fresh wild speculation. How, he may ask, is the proof to be got whether or not these effects finally record themselves outside the only system of which we have any verifiable knowledge ? Before pursuing that difficult point let us see how this qualified theory of a limited operative-process for fulfilling Prayer by minute increases of Energy, within the human apparatus, accepted provisionally for a moment, works out. It evidently implies a great restriction of the range of reasonable supplication ; at first sight, indeed, it appears to contract it within most narrow bounds.

A second, closer view, however, gives again some widening.

In the first place it is clear that a response to an act of aspiration for strength to bear the trials which happen in a man's own lot, or any particular trial among them, and, also, supplication for greater wisdom (in so far as that means better cerebration) generally in the future, if structuralisation to that effect was already available for such aspiration, is in the direct way of the assumed mode of the arrival of increase of Energy,—what is asked in all these cases is simply further modification of actualising-structure. But here, again, a preliminary question arises. It was just glanced at in the Chapter on "The Will," but it needs bringing forward here again, without our greatly heeding slight repetition in doing so.

What degree of articulateness is required in Prayer? It is plain that what may be called a primary act of aspiration can hardly be fully articulate, since that would suppose prior structuralisation already very largely fitting in with it. According to the doctrine of the early great Christian teachers, Prayer need not be articulate at all; also they affirm that the articulation may be wrong, and yet the error not practically signify; in other words, that a request may be made mistakenly as to its particulars and still the Higher Providence come into play,—the vital thing being the mystical act of aspiration. It would seem that the case may be put thus,—It is likely, in reference to ordinary experience, that a growing freedom of articulateness means progress in the realisation of a repetitive-aspiration, which is, in fact, being fulfilled in structuralisation more-and-more from occasion to occasion, but in any unusual crisis of experience the articulation will necessarily be imperfect; also, a great deepening and

refreshing of aspiration would seem certain to be very defective in articulateness at some points. The fact is worth noting, that the very first Christians somehow reached in their experience a subtlety of apprehension which made them, as in other cases before named, fully aware practically of this scientific difficulty. They asserted that a Spirit, that was not man's, but which was in mystical union with him, made intercession with his spirit in a way that dispensed with full articulateness.

Now we may go back to the point where we broke off. We saw that it was in accordance with the second, that is, the qualified theory of Prayer, that a Christian might hope for any result *which might be worked in a modification of his own actualising-structure by means of minute additions to it.* But it is required further to trace the scope which it is possible for Providential skill (using the only phrase which seems open to us) to give to Prayer by the indirect operating of such increases of energy made to human apparatus *when the men obtaining them are fully interrelated socially.* It is a matter of the commonest observation, that in a large number of the cases of alleged improved goodness in pursuance of aspiration, the men and women practising it become increasingly active socially in philanthropic ways. This fact obviously sets on foot wide possibilities. At such a time, a man with means for assisting others, or one having the power of bringing to bear the help of societies or of fellow-workers, would be not unlikely to set out searching for cases where he might give aid. If he did not do this, at any rate a quickening of sympathetic observation on his part would naturally take place which might more-or-less have the same effect practically. The occurrence of a moment of freshening of social impulse in such an individual, or the arising of a new organisation

among a number of persons, has only to coincide with, or in any way to occur in relation to, the time of need in another man's case, and it is plain, that, by the order of granting the added Energy, and its quantity, these happening so as to stir the cerebral activity associated with its receiving with some little speciality of direction, the one event might be made, if there is this Providential skill acting, so to fit in with the other as practically to give a response to the request of the person in want. All that would be needed in order to this would be, so to speak, sufficient management in a ruling Providence. Further, by provision on the part of a Providence which had reserved to itself this opportunity of interfering, the past non-aspirations of men might be taken into account, and, in their actual consequences, be in just the same way overruled so as to agree with others' occasions beneficially; securing timely bodily presence in certain places, and the stirring of sympathies lower in kind than those describable as philanthropical.

What this adds to the affirmation before set forth as to the direct fulfilment of aspiration in men themselves by means of their own structure is this,—That those occasional increments of Energy happening to some individuals may, reasoning hypothetically, be made incidentally to answer the supplications of others in any matter *which can be effected by the agency of another human being*, within the natural circumstantial limits,—since human beings, according to the hypothesis, are in manipulative-contact with the Source of Power in a way of possibly-increasable quantity of Energy.

Another logical reflection now offers itself in completion of one earlier put forward.¹ If there is, by grace, as alleged, actual impartation of Energy within the bodily structure, there is an opening for prayer on the part of individuals themselves for physical help against disease, within the unknown limits

of the potentiality of such small increments of Force ; for it is conceivable that the additions given in response to right aspirations could, if made by an intelligent, sympathetic Being, be bestowed in an order and at a juncture which might stimulate the bodily-system generally in a way of aid of this kind. Only expectations in respect of such curative help would have to be rationally restricted, not being made antagonistic to the general scheme of things, nor pushed beyond the bounds which the Providential Will may be supposed to have assigned to the increments given by grace; the stimulus not being expected unlimitedly to replace or substitute structure,—to reproduce, for instance, a bodily member or organ, or to continue life here indefinitely. It is obviously open to a Christian, for example, to argue that it is a part of common-sense to recognise this limitation in the physical modifications, and to distinguish between such understandable restriction of the field of Prayer and a doing away with Prayer for bodily help for himself altogether. It scarcely needs pointing out, moreover, that, according to the hypothesis, the necessary accompanying of such a prayer by a right aspiration, one suited to the situation, would secure the prayer's being made in a spirit of resignation, and not from selfish motives. If those conditions were not fulfilled, the needed effective act of aspiration would obviously be absent in the case, leaving, on this theory, no reasonable ground for hope of fulfilment.

Down to this point the question has been considered under the aspect of the individual praying for himself, the inquiry being limited to trying to ascertain how far the prayers may be in his own person answerable directly, and also incidentally by means of a general social-use developing,—that is, by the Energy imparted to himself in the way of grace, and by the overruling and skilful adjusting of such

increments of Energy in the modes of general activity, one man coming to another's help. But another point has to be examined, namely, whether there are any grounds for supposing that prayers for others can avail, either in the way of curative or mitigatory help in case of bodily disease, or for improvement in their worldly circumstances through assistance from others, or directly in their mental and spiritual state? For the belief that prayer for others has validity is a distinct Christian doctrine.

What does such a supposition, adopting the above-specified second hypothesis of Prayer, seem to imply? Speaking generally, it appears to imply this,—that the Source of Power, as a means of establishing a large extra sympathetic-relationship between Himself and men (as well as constituting a further social-bond among human individuals) determined to make their prayers for one another available by adapting to the requests of such supplications His particular treatment of the occasions of any right aspirations in the individual prayed for; also by His Providential arrangement of the philanthropic activity of others, or their personal presence, etc., as already explained, and by His, in these ways, giving challenges to choice of aspiration as to Conduct in the individuals. Here, again, however, limitations of the availability have to be recognised; on the above principle the answers must not be expected to go beyond certain bounds of the offering opportunities,—that is, the responsive operation will only find its opportunities in the occasions offered by the activities of human beings, viz., the individual directly concerned and others incidentally grouped with him socially. But for a common-sense appreciation of these right limits in expecting, the practice of Prayer might lead in some individual cases to an injurious slackening of personal exertion; and in less enlightened times it doubtless

has done so. These points, however, run into the larger questions of moral conduct and the history of the race, which we need not re-open here.

It would be an omission not to mention, further, that in the early Christian records the claims made for the availing of prayer on behalf of others, together with the effect of the laying on of hands, or even of mere personal nearness within some limits, go to the extent of affirming the working of so-called miracles. The statements are of a kind which are repellent to scientifically-habituated thinking. Is there any argument urgeable which the modern intellect will listen to? It may be recalled that the men in whose cases these larger answers to Prayer are stated to have been given, were exceptional persons, of whom it is affirmed that they aspired in a grander way than ordinary. According to the Christian hypothesis, they would receive great general increments of Energy. In this presentation of the case, adding to it the response of imagination in the patient, seems to lie any chance there may be of rationalising, in accordance with this second qualified theory, the process of the curative operations alleged to have occurred, for instance, in the Apostolic times.

One other point remains. Is it to be supposed that Prayer has any use with respect to public affairs? It would clearly seem, that, inasmuch as political business is operatively-related to the activity of human beings,—monarchs, statesmen, and the general public,—the affairs, on the above view, hypothetically are modifiable in their course, in so far as the Source imparting occasional-increments of Energy to individuals reserves quantitative control in the granting of those additions. Once more, if that theory be adopted, it may be said to be simply a question of the Providential skill—so to put it—which is shown in that respect.

It would seem now to be possible to fix with some approximation to preciseness, the necessarily-narrowed limits given by the above hypothesis to what it would imply to be the reasonable practice of Prayer.

According to the reasoning on which it rests, it would appear to be right to pray for personal self-modification in the way of moral and spiritual improvement, and, also, within limits checked by common sense, for physical help against bodily ailment; also it says, it is right to pray for others in those respects, so long as the expectation of fulfilment does not again go beyond the limits of the opportunities afforded by the impartation of Energy structurally in the grace granted to the individual and to others overruled to help him; and, further, it affirms it to be justifiable to pray for the rectification or the fortunate happening of public affairs, in so far as they are dependent upon or connected with human effort.

On the other hand, there being no suggestion of any extra, occasional arrangement for *withdrawing from the mundane system Energy which had been exceptionally introduced in ways apart from the apparatus of the human organisation*, the sum-total of Matter seeming to be maintained at a fixed quantity, or, under the largest supposition of inadequacy in the present calculus, not very far from a fixed sum, there are not grounds for reasonable expectation of answers to prayer for alterations in the natural physical-processes of the world beyond the limits in which human activity can work those alterations.

This reasoning gives a real restriction of the field of Prayer, but it leaves still a wide realm open for supplication,—if there be Providential skill working.

But it must always be understood, that, according to the assumptions of this second theory of Prayer, there is, unless

there be some unknown process of disconnection and annihilation of Force, a perpetual increase of Matter going on somewhere in the physical Cosmos in-and-through these concessions of added Energy made occasionally to the human apparatus. If scientific men were able to say that their calculus was so perfect that it could demonstrate that no such increase of mass was taking place in the solar system, this theory of Prayer would be disproved if that system were commensurate with the universe. But any such commensurateness is scientifically disproved: Science assures us that the Cosmos extends far beyond such limits. There still remains possible, therefore, the supplementary hypothesis, that subtractions of Matter, however small and subtle, from this local system compensatingly take place by transfer at the deaths of all or of some human beings. We earlier raised the question of whether scientific men are at liberty to style this a wild assumption. Obviously they are bound to recognise the demonstration by their own triumphant discoveries of the fact that there is already actual in the universe such an extension of sphere as would make this practicable, and that our system has subtle inter-relations with other systems, seeming to favour this notion in a general way to the extent of suggesting it as a cosmic possibility.

Finally, this definition of Prayer must necessarily seem to anybody who has practised praying with the old unscientific license, stiff and low, if their intellect will not let them call it narrow. The truth is, there yet remains to be taken into account the fact pointed out at the close of the inquiry into the Will, namely, that our emotional experience is far greater than the efferent activity engaged in the practical conduct. In the highest sense, Prayer has to spread wider, to rise higher, than the making of special, particular requests relating to overt occasions. In it the

Will, by means of the structuralisation already possessed, rehearses itself generally, with large aspirations; the Conscience soliloquises, trying to become articulate in the new syllables it has picked up fragmentarily. Conduct, to put it briefly, in this act grows ideal, but, if the Christian doctrine of grace be true, it is rescued from unreality,—becoming, indeed, then more effectively validated than at any other time,—by finding itself in conscious communion with the Source of Power, and in the very act of receiving added Energy for use hereafter. The fact of the hypothecated improvements of structure granted for one occasion not being likely to be perfectly adapted for all others, owing to the subtlety of human affairs, seems to point naturally to Prayer for their own perfecting in the intervals of actual trial, in that manner making anticipatory preparations for the testing occasions yet to come; and, on the other hand, structuralisation perfecting, or perfected, just as naturally in its rejoicing would be likely afresh to uplift the hands and voice, though this time the attitude and the notes must change to those of thanksgiving,—prayer passing into praise.

In what state does the controversy now stand? What (in addition to the risk of causing slackening in personal effort, as to which we have already offered a remark) is the objection which can be urged from the side of the scientists to a strictly limited use of Prayer such as the above would be? It is this,—that even such abated looking for aid from a Supernatural Source would turn away to some extent the search for knowledge as to natural physical operations and resources. As before pointed out, this assumes that human Attention is not capable of stretching so as to include the two processes. The social duty on those using Prayer is, consequently, to disprove that suppo-

sition by unfailing cultivation of Science, and it seems that they should do it rather ostentatiously, for the scientists have a long array of facts in support of their position to quote from history, which facts can only be finally nullified by the accumulation of opposing new ones. If they supplied them, it would then be the objectors who would be chargeable with deficiency of range in Attention.

The above seems to include what can be urged on either side of the question.

I N D E X.

I N D E X.

- Accident, physical, makes scientific generalisation possible, 549
- Activity, muscular, same patterns of, may occur in virtuous and vicious conduct, 674
- organic, aggregation of, needed for consciousness, 129
- reflex, 311
- Algebra, economising uses of its symbols, 145
- Altruism, 451
- Analogy, the Law of, basis of Reason, 425
- Anæsthetics, process of, 73
- Animals, lower, sufferings of, 550, 552
- Anti-Optimist's case, its final statement, 559
- Apparatus, Science gives man detachable external set of, 503
- Art, cerebral mode of, 263
- connection of, with morality, • 749, 755
- educates us to observe Nature, 741
- final defectiveness of, compared with Conduct, 758
- four functions of, 706
- great function of, to rehearse egoistic-possibility, 743
- how growth of Physical Science will aid it, 756
- how its spurious gratification is got, 722
- how realism in it injures, 756
- place of symbolism in, 745
- principle of operative process of, 740
- Art-criticism, mistakes in, 711
- Aspiration, egoistic, is mystical, 319
- Associational Theory, basis of, 720
- Attention, abating process of challenge in, 143
- arts for minimising, 144
- casual relaxations of, 169
- conjuror's method of, 152
- disabling power of cerebral cross-cues, 135
- eking-out power of fragmentary Neurotic-Diagrams, 137
- extreme cases of, in Mesmerism, etc., 136
- higher phenomena of, 128
- how excitement operates in respect of, 150
- how the tyranny of Impression, etc., is evaded, 127
- how we choose among impressions, etc., 128
- is it wide enough in man for both Science and Religion? 469
- it need not always be perfect, 141
- its nullification of sensation, 123
- morbid phenomena of, 160
- one of the means of the blocking of nerve-fibres at the cerebral endings, 134
- operation of, in the moral realm, etc., 161
- partial volitional disaggregation of Impression is sufficiently nullifying of, 132
- power of arranging not to attend to some impressions, 155

- Attention, power of prearranging for, 158
 — schoolboy's method of, 151
 — some typical cases of, 151
 — the germ of, 124
 — the muscular aids to, 125
 — use of the Language-faculty in, 147
 — what it means, 122
 — working rule of, 140
- Beautiful, the, golden canon of, 737
 — sub-laws of, 714
- Beauty, complementary laws of, 290
 — connection between, and Pleasure, 282
 — in highest instances of, gives no mixture of Pain, 285
 — in lowest order of instances of, means aggregation of identical impression, 52
 — sub-laws of, 287
 — the primary sensations not beautiful strictly, 281
- Brain, the, constitution of, 22
 — for specific phenomena of consciousness, localisable parts of it must interact, 22, 121, 204
 — has power of multiplying movement intercranially, 21, 222
 — the explanation of cerebral versatility, 116
 — the *minimum* activity of, giving consciousness, 25
- Caricature, reason of liking for, 136
- Causality, Law of, 369, 436, 485
- Causation, bearing of Muscular Sensation on, 587
 — does the Ego give any intelligibility to it? 591, 599
 — Hume's criticism of, 587, 593
 — its blank the opportunity for spiritual sentiency, 600
 — material, its "style," 624
 — measured by our Efferent Activity, 197
 — mode of, 481
 — substitutory representation of, 591
- Causation, the fundamental question of, 587
- Cerebration, is there now simplification of, in some modes? 425, 440
 — unconscious cases of, 106, 113
- Christian, the, what he affirms, 340
- Chronological Association, how it is worked, 681
- Chronology of occasions and of moods different, 450
 — required in Nervous Activities for right experience, 445
- Civilisation, great part of, is manipulation of sensation, 16
- Cognition, 217, 237
- Comedy and Tragedy, 742, 750
- Comparison, mode of, 187
- Comte's three Laws of Human Progress, 543
 — three Laws, an illusion in respect of, 545, 592, 595
- Conceptions, 185, 187, 194, 213
 — physiological aspect of, 207
- Conduct, an alternative Ideal position for a derivative being, 537
 — explanation of "averages" in, 360
 — improvement of, implies abstaining, refraining, 318
 — in all the higher experience of, progress won through Pain, 702
 — in what way man is accountable for, 342
 — made consequential, 300, 349
 — made necessary by appetites, 303
 — objective aspect of, 301
 — our acts take us by surprise, 532
 — overt as well as covert, 345
 — overt occasions of, not sufficient, 360
 — Pain has to be avoided as well as Pleasure sought, 303
 — partially calculable between willings, 329
 — practical test of, 308
 — rightness of, implies enlargement of egoistic consciousness, 306
 — subtlety of, 303

- Conduct, the Art of, 459
 —— the realm of, 298
- Conscience, a hypothesised evolution, 359
 —— and casuistry, 370
 —— cerebral mode of, 353
 —— Christian doctrine of Holy Spirit acting on, 364
 —— Faith, final function of, 369
 —— finally committed to virtue, 361
 —— freedom of, 370
 —— how sanctions of, arise, 351
 —— involves a unification of experience, 669
 —— irrationality of some compunctions of, 535
 —— last stage of exaltation of, 358
 —— may show great temporary anomalies, 352
 —— progressive development of, 355
 —— relation of, to Will, 358, 362
 —— sets up an activity of its own, 354, 356
 —— takes note of omissions to will, 346, 360
 —— the germ of the faculty of, 349
- Consciousness, a Nervous System needed for, 5
 —— antithesis of emotional and intellectual, 100, 216
 —— associated activity of locomotor apparatus needed for, 27, 29
 —— can be started through any of the senses, 23
 —— chronological relation of, to the executive-operation, 638, 643
 —— coincidence of movement in two sense-organs needed for, 27
 —— conditioned by the intra-bodily executive-system, 631
 —— conditioning-apparatus of, 4
 —— does not depend on the general cosmic situation, 629, 637
 —— during continuance of, there may be enormous fluctuation in sum-total of brain-activity, 23
 —— every modification of, asks specific nervous activity, 6
- Consciousness, for it cerebral-reactions are needed, 12, 23
 —— four styles of, to be recognised, 40
 —— general process of, 39
 —— how is it dynamically unified? 646, 652
 —— initial law of, 27
 —— is there rudimentary, in Matter? 686
 —— minimum of, 45, 110, 129, 132
 —— non-continuity of, 679
 —— numerical deficiency in its kinds, 635
 —— occurring, or ceasing of, has no physical operativeness, 626
 —— phenomena of, temporary additions to the sum-total of being, 17
 —— physical occasions of, are not simple events, but elaborations, 676
 —— primary laws of, 45
 —— seeming disparity of its rate in some cases, 112
 —— suggestive complexities of, 614
 —— the higher it rises, the more it is in excess of current peripheral impression, 91
 —— the occurring of, does not work change in the conditioning-movements, 16
 —— the primary data of, 2
 —— two hypotheses of its conditioning, 42
 —— units of, not the same as units of Impression, 45
 —— vicissitudes of, are imposed upon us, 3
- Content, an Emotion of, 554, 575
- Contiguity, antagonistic to Resemblance, 181
- Contrast, 180
 —— need for, 732
- Debility, bodily, mental and moral vigour may co-exist with, 397
- Deduction, 206
- Dissipation, mode of, 450
- Dogma, anticipations of scientific conclusions, 417
 —— canon for preliminarily judging 412

- Dogma, historic transformability of, 416, 474
 — is there rational basis for? 403
 — its hypothetical solution of Evil, 568
 — practical test of, 414
 — rules for criticising the averments of, 416
 — the belief in the Devil, 417, 474
 — the old beliefs purported to give intellectual activity for the whole human situation, 465
 — the sealing article of, 408
 Dreams imply failure of egoistic reminiscence, 261
 — rapidity of, 387
 Duties, organisation of, 442
- Effectiveness, Law of, 54, 229, 393
 — is its range extended in the spiritual experience? 671, 675
 — relation of, to theory of all Matter being conscious, 688
 — sanction of, 483, 567, 580
 — seeming arbitrariness of, 499
 — validity of, possibly changeable, 568
 Effects, physical mode of multiplication of, 403
 Efferent Activity, the, 191
 — represents the cosmical-operation, 197
 Ego, the, actualisation of, continues along with changes, succession, etc., in sense-activities, 24
 — area of, fixed by the efferent-activity, 259
 — bearing of the facts of Pain on, 656
 — degradation of, sometimes seen in Age and Disease, 394
 — does it add phenomena when it is actualised? 236, 639, 645
 — does not command the cues of its own history, 251
 — duplicity in, 321
 — fundamental sentiency at the root of, 585
 — has duplicity in its function, 323
 — has it creative power? 233
 — has it duality? 257
- Ego, the, how its present limitations are enforced, 695
 — inadequacy of the single division into egoistic and non-egoistic experience, 243
 — intervariability of the Egoistic and Non-Egoistic dividing limits, 256
 — is it illusive? 595
 — is its actualisation connected with special cerebral ganglia? 662
 — its cognition of itself, 237
 — its historical range of reminiscence, 249
 — Mind an economy larger than, 234
 — non-egoistic apprehensions always accompany egoistic awareness, 233
 — partial failure of, would make the world seem an actualising apparatus, 693
 — possibilities of dramatic surprises in, 256
 — possible versatility of, in giving different types of personality, 247
 — primary mode of, mystical, 322
 — restatement of the Law of actualisation of, 221
 — seems to have once had another mode, 695
 — simple and identifiable-personality in, difference between, 35, 244
 — small neurotic modification can change its self-apprehension entirely, 672
 — the effects of narcotics, intoxicants, etc., on the self-feeling of, 248
 — the primary self-feeling of, 230
 — the still higher egoistic possibilities of, 254
 — two alternatives for sanction of, 41
 — uses of Law of Actualisation of, 36
 — whether sensory conditioning-movements actualise it, 19
 — working-rule of Actualisation of, 32

- Egoism, 451
 Egoistic Actualisation, mode of retrieval of, 569
 — not executively conditioned at all, 691
 — shows a margin of variability in its conditioning, 659, 664
 Emotional Expression a crucial proof of Law of Pain, 82
 — and the Neurotic-Diagram, 117
 Emotions, the, assumption of the expression of, tends to cause them, 276
 — civilisation abates and refines expression of, 277
 — conditioned by motion in the cerebral ego-actualising cells, 267
 — connection with the Sympathetic Nervous System, 273
 — dynamical explication of, 654, 658, 666
 — how quantified, 699
 — how related to the efferent activity, 275
 — mode of expression of, 272
 — of more value than sensations, 269
 — principle of Association of, 292
 — substitutive use of facial expression in, 278
 — the final educative uses of, 697, 704
 Energy, can it be withdrawn from mundane system? 331
 — does Deity supply it for the effectuating of evil? 540
 — increase of, on mystical aspiration occurring, 324
 — individuated at our first apprehension of, 479
 — seriated transformable kinds of, 482
 — specifiable alterations in behaviour of, 14
 Ennui, cause of, 276
 Entity, attempt of modern philosophy to *minimise* notion of, 610, 613
 — first glimpse of second aspect of, 642
 — is there evidence of other than Matter? 608
 Entity, Physical Science widens inference of, 613, 617
 — process of organisation of, 622
 Eternity, 582
 Evil, as it offers in the individual case, 555, 562
 — attempt to fix practicable limits to the discussion of, 506
 — can future good sentiency compensate present ill ditto? 509
 — conclusions as to which both sides agree, 573, 575
 — exaggeration in supposed quantity of, 547, 550, 553
 — hypothetical solution of, 568
 — in no case left finally vindicated, 575
 — insurmountable controversial difficulty of, 572
 — is a Curative Emotion frameable? 529
 — is the quantity existing exaggerated by Modern Science? 542
 — moral, definition of, 530
 — none of its instances without mixture of good, 544
 — not accidental, 575
 — objections to the Optimist view of, 538
 — Optimist's solution of, 561, 574
 — problem of, 505
 — Science unable to solve the problem of, 565
 — solution of, requires aid of dogma, 576
 — two modes of stating question, Pessimist and Optimist, 511
 — vindicated on the large social scale, 554
 — was the world made from defective material? 511
 — what knowledge required for solution of problem of, 505
 Evolution, doctrine of, 491
 — evidence in favour of, is accumulating, 499
 — hypothesis of, must be decided by Science, 498, 501
 — in case of social emotions Utility breaks down, 501

- Evolution, later developements of,
likely to be intra-uterine, 500
— the objections to, natural, 498
— traceable developement of,
widens field of mental ac-
tivity, 501
- Excitement, how it operates in At-
tention, 150
- Executive-operation, the, final mode
of, not Motion, 323, 641
- Executive-Order, the, characteristic
of, is fixedness of quantity, 625, 680
— intra-bodily, decides conscious-
ness, 4
— two systems of, a larger and
minor, 4
- Executive System, man has no
power over, 571
- Exercise, 66
- Experience, ascending related cere-
brations needed for final
organisation of, 465, 467
— higher forms of, ultimate, not
primary, 436
— higher organisations of, pos-
sible, 461
— historically-arisen deficiency
in organisation of, 473
— organisation of, 434
— perfect organisation of, not
possible, 447, 470
— sensory, how unified, 651
— use of rectifying-generalisa-
tions of, 447
- Extra-bodily elemental activities
translated into intra-bodily
ones, 8
- Faculties, is there any evidence as
to unused or prior organs of,
in man? 566
- Faith consists in Hypothetical
Assumptions, 409
— final generalisation of, gives
not Infinity and Eternity but
Potentiality, 427
— in what way dogmatic verities
are apprehendable, 406
— not fully definable verbally,
432
- Fall of Man, doctrine of, 73, 235,
240, 335, 537, 704
- Fall of Man, and the notions of
Modern Science, 564
— how it helps solution of Evil,
563, 569
— repetitions of "sensory falls"
possible, 500
— the doctrine for a long while
mentally acceptable, 56
— three great facts in favour of
the notion, 564
— where is there any historical
evidence of? 566
- Fatigue, experiment of, 58
- Feelings, collective kinds of, 456
— seem too large in scale for this
life, 389
- Force, a fixed sum of, 12, 481
— existing statically does not
give human consciousness, 12
— the notion of, seeks to include
both statics and dynamics
with the potentiality of their
interchange, 1, 2
- Ganglia, cerebral, special, 34
- Geology shows earth same as be-
fore man came, 566
- Germ of an organism, 486, 489, 490
- Good of greatest number got by
means converting into ends, 306, 356
— not a maxim for government
of a universe, 557
- the, its mode, 305, 350
- Grace, the Christian doctrine of,
344
- Habit, 61
— can work two practical effects,
227
- Harmony, laws of, 726
- Heat, subtlety of the sensation of, 58
- Humour, 750
- Ideal, the, explanation of, 173
- Ideals, different types of, 739
— rule for comparing and esti-
mating, 294
- Ideas, association of, 293
— Laws of the succession of,
162, 164, 168
— potentiality of, in Neurotic
Diagram, 112

- Ideas, the succession of, how Contiguity, Resemblance, etc., work, 180
 — Laws of Extent, Rapidity, etc., 178
- Imagination, the machinery of, 108
 Impression, aggregation of, needed for consciousness, 129, 132
 — minimum of, which is effective, 25, 45
 — overriding efficacy of, 114
 — the term needs reinterpreting, 8
- Impressions are organic operations cosmically-prompted, 10
- Individual, guarantee for resumption and continuance of, 383
- Induction, 206
- Infinity, 582, 584
- Inheritance, mental, etc., 109
 — cerebral preadaptations, 375
- Instinct, 109
- Intellect, the, a free hypothetical activity possible, 211
 — consciousness of, conditioned by the Efferent Activity, 191
 — effort is needed for style of consciousness of, 193
 — great multiplication of consciousness of, 215
 — helps for minimising process of, 204
 — how critical function of, arises, 185
 — how it uses the Language-faculty as a supplementary muscular apparatus, 202
 — in all conceptions of, a practical consequence is involved, 198
 — mode of, 184, 215
 — practical interchangeability of passive impressions and efferent activities, 199
 — process of, involves interpenetration of consciousness, 210
 — relation of, to Emotion, 215, 216
 — style of neurotic diagrams it asks, 649
 — the abiding inference it gives us in its generalisations of Space, Time, Substance, etc., 219
- Intellect, the volitional apparatus
 — its machinery, 192
 — ultimate glimpse of cerebral mode of, 208
- Judgment, process of, 646
 — the higher operations of, 213
- Language enables us to revive and repeat neurotic-diagrams at will, 147
 — modern obscuring of spiritual terms, 766
 — scientific terminology promises new spiritual phraseology 766
 — the covert as well as overt use of, 149, 202
- Laughter, 85
 — explanation of, 752
- Law, a generalisation of mode, 59
- Life, definition of, 489
 — future, doctrine of, 332, 384, 400, 428
 — future, how Modern Science favours it, 428
 — human, partial sweetness of, 573
- Literature, cerebral mode of, 263
 — place in Art of, 746
- Logic, forms of, are rules of Attention, 183
 — uses of formulae of, 145, 183, 206
- Man not commensurate with the executive-system, 579
 — not in sensory contact with the inferred extra-bodily world, 8
 — the arrangement needed to make him a moral creature, 529, 533, 536
- Material events have to be spoken of in mental terminology, 678
- Mathematics, use of the symbols of, in minimising Attention, 145
- Matter appears to limit the efficacy of Mind, 643
 — how can it nullify Mind at some points? 685
 — Mr. J. S. Mill's definition of, 189, 586

- Matter, the primary and secondary qualities of, 198, 585
 Media, the contributory, 486
 Melancholy, the pleasure of, 254
 Memory, a merely temporary power of, 167
 —— collective-molecules in the brain and transverse additional fibres needed for, 96
 —— explanatory hypothesis of, 95
 —— implies repetitive activity at cerebral endings of nerve fibres, 91
 —— proper, in it we know that we are remembering, 101
 —— the direction of sensory nervous vibrations is changed in, 663
 —— the mechanism of, 87
 —— the senses give intercommunicating prompting cues, 92
 —— trivial cues of, 167, 175
 Metaphysics an attempt to get further cognition, 579
 —— and the Positivists, 579
 —— how the questions of, arise, 578
 —— Law of Effectiveness is the first problem of, 580
 Mind, an economy in itself, 642
 —— defects in the theory of Matter nullifying it, 690
 —— incommensurateness of, with Matter, 15, 606
 —— seems to get its activity from Matter failing to repress it, 644
 —— system of, larger than the Ego at present, 694
 —— takes note of executive events now sensorially, 696
 Miracles, 415.
 Mistake, the process of, 171
 Mnemonics, the principle of, 180
 Molecules, cerebral, collective, 96, 103, 110
 Moods, mode of, 377
 Moral being, sketch of, 571
 Moral qualities, how opportunities for, are got, 161, 176
 Motion, a general name for the executive operation of the world, 4
 Motion, a non-self-explicatory term, 1, 323
 —— a specific feeling accompanying muscular activity, 1
 —— all dynamical quantities of, are componently interchangeable, 635
 —— cerebral, how systematised, 646
 —— conception of, finally stultificatory, 640, 679
 —— in emotional expression specific, 85
 —— in-general does not condition human consciousness, 6
 —— is the ultimate ratiocinative expression, 1
 —— inter-relation of, with position, 480
 —— mere "additions" of, condition consciousness, 633
 —— size, rapidity, direction in, specifically condition consciousness, 7
 Motive, 337
 Muscular Activity, can it actualise consciousness without addition of another sense? 32
 —— carries forward its sum-total from stage to stage, 208
 Muscular Sensation, the, 192
 Music, how it gets its marvellous effects, 744
 Nature multiplies individuals as well as improves type, 544
 —— our knowledge of Laws of, at present numerically deficient, 422
 Nerve circuits, 223
 —— fibres, not individually effective for Consciousness, 20
 —— fibres, ratios of, 47, 51
 —— matter, grey, 95, 233, 68
 —— substance, instability of, 95
 Nerves, afferent and efferent, 311
 Nervous activity, below specific quantity, does not count in consciousness, 105
 —— areas, Law of decrease of, 62
 —— centres, reflex, 204
 —— Co-ordination, qualification of, 79

- Nervous Co-ordinations, great subtlety of, 58
 — System, the, multiplies discharge at each stage, 325
 — the sympathetic, its relation to the Emotions, 273
 — Transmissions, rate of, 9, 386
- Neurotic-Diagram, a little modification of, gives wholly different consciousness, 111
 — and emotional expression, 117
 — comprises analogue forms, 106
 — continuous fluctuation of, 104
 — fading, how forced to reappear, 148
 — how framed by cumulation, 109
 — how it gets its effective delimitation, 105
 — mode of working of, 112
 — the description of, 102
 — the focal point of, 120
 — the need for the name of, 91
 — the permutation of, 163, 168, 178, 182
 — the Rules of the permutation of, 164
 — transposition of parts of, owing to disease, accident, excitement, 172, 176
- Novelty, working rule of, 733, 735
- Number, the conception of, 187
- Objects, how apprehended, 105, 162
- Observation, 87
- Optimist, his solution of Evil, 561
 — last word of, 577
- Organic spontaneity, 222
- Organisation, effectuates itself by chronological coincidence and non-coincidence of activities, 485
 — grade of, fixed by complexity and power of widening habitat, 486, 488
 — in it we are practically dealing with Motion, 497
 — interquantification of Motion in the Executive System, 11
 — right principle of, 723
 — use now made of idea of, 621
 — vital, sums up Nature's other processes, 497
- Organisation, what it means, 621
- Pain, ancient and modern theories of, 771
 — and Emotional-Expression, 83
 — bearing of discovery of anaesthetics on moral aspect of, 72
 — can be changed into Pleasure, 657
 — capable of classification, 55, 57, 76
 — how avoidable, 54, 73, 74
 — in cases of, the consciousness is in excess of the conditioning physical activity, 82, 390
 — includes the historical nervous reminiscences, 60
 — intellectual and emotional uses of, 512
 — "irrationality" of, in some cases, 68, 534
 — Law of, 54
 — mode of, 391
 — — not a mere fading of egoistic experience, 655
 — — not egoistically caused, 703
 — old beliefs as to use of, 71
 — owing to disintegration of prior nervous co-ordinations, 55
 — quickness of, in some cases, 392
 — reason of disparity between, and Pleasure, 61
 — supervenes on sensation, etc., 80
 — the common explanation of, 657
 — the higher phenomena of, 77
 — the sub-laws of, 64
- Pantheism, physical, inevitable, 595
- Passions, the, changes in, 377
- Perception, the distinction between, and Sensation, 187
- Peripheral fibres, back currents in, 134
- Person, meaning of the term, 239
 — Supreme, the, 420, 695, 697
- Personality, how enlargement of, is got, 307
 — idea of, 680
 — implies multiplication of effects, 597

- Personality, conception of, necessary, 425
 —— instability of, 255
 Pessimism, difficulties of, 560
 —— no perfect illustrative example of, 558
 Pessimist, the argumentative case of, 559
 Phenomena, general formula for, 484
 Phrenology, generalisations of, 22
 Physics, new hypothesis of, 606, 612
 Physiology, recent researches in, 13
 Pleasure, ancient and modern theories of, 771
 —— capable of classification, 76
 —— implies large activity of the egoistic-molecule, 81
 —— means economical enlargement of consciousness, 283
 —— not a worthy final feeling, 697, 704
 —— sensory, depends on selective occurrence of Impression, non-agreeing nervous ratios being left out, 50, 51
 —— supervenes on sensation, etc., 80
 —— the higher phenomena of, 77
 —— the Law of, 48
 —— variability of, 67
 Poetry considered as a branch of Art, 746
 Positivism, aim of philosophy of, 465, 470
 —— where lies the strength of controversial position of, 466, 470
 Positivists try to use curative power of Imagination, 511
 Potentiality, conception of, native to man, 591
 Prayer a means of rehearsing Conduct, 790
 —— any answer to, alters statics, 780
 —— bearing of Physical Science on, 776
 —— does it require articulateness? 782
 —— express statement of scientific objection to, 777
 —— limited scope of, 473
 —— limits of the modified theory of supplication, 783
 Procreation, the process of, 490
 Progress, human, mode of, 503
 —— lateness of, part of problem of Evil, 504
 Protoplasm, 489
 Realism, scientific, how it differs from the old type, 618
 Reality, is there objective? 601, 615
 Reason, the machinery of, 108, 214
 Recreation, what the word covers, 709
 Reflection, 206
 Relation, 187
 Relativity, doctrine of, 211, 217, 320, 646, 653, 665
 —— some facts show its arithmetic compound, not simple, 684
 Reminiscence, 398
 —— economy of, 88
 —— potentialities of, 163
 Repair, process of, 59
 Resemblance antagonistic to Continguity, 181
 Reverie, 141, 154
 Ruler, Supreme Personal, 580
 Satire, use of, 712
 Scepticism, modern, genesis of, 421, 441
 Science, chief modern generalisations of, 477
 —— great anchoring work of, 502
 —— investigation of departmental, 477
 —— one of three modes in which man's lot might have been bettered, 502
 —— wonders of, only beginning, 504
 Scientific analysis, two facts it does not touch, 601
 —— Discovery, the mode of, 179
 Scientist, the, strength of the position of, 562
 Self, the feeling of, and the Not-Self, rule of proportion between, 35
 Self-denial habituates Attention more largely, 265
 Self-sacrifice, Law of, 568
 —— the intellect may frame calculus of, 566
 Selfishness implies dwindling of egoistic actualisation, 265, 308, 435

- Sensation, common, margin of variability in, 67
 — each includes a grouping of units of Impression, 666
 — forgotten possibilities of, 62
 — groupings of, only gradually formed, 89
 — kinds of, not numerically equal to changes of executive-mode in Energy, 15
 — may cause either pleasure or pain, according to order of happening, 80
 — metaphorical style of, 393
 — new modifications of, possible, 16
 — symbolical, 246, 279, 398, 411
 — the physical conditioning of, reproducible executively, 15
 sensations, no absolute physical demarcations answering to limits of, 665
 sens, forfeited, is there any evidence of? 567
 — organs of, specific differences of movement in, 7
 — the special, and their pains, 74
 sensorium, 120
 Sensory experience, minor modifications of, have been added, 696
 Sentience, resources for retrieving right chronology of, 471
 — the religious, how conditioned, 439
 Sin, 418
 — theological view of, 540
 Size, the conception of, 187, 196, 208
 Smell, 75
 Soul, the, and the Ego not commensurate, 401
 — as guarantee of future existence, 384
 — evidence of prehabituation of finer apparatus acting here, 385
 — first rough definition of, 375
 — has a vital history, 377, 389, 400
 — hypothesis of, 371
 — is not the "body" sufficient? 373
 Soul, the, not always in consciousness, 376
 — requires prompting cues, 378
 Sound as illustrating Attention, 133
 Space conditioned by our incommensurateness, 640, 679
 — how conception of, arises, 582
 Sublime, the, connection of Terror with, 725, 733
 — consists in apprehension of greater scale of existence, 289
 — function of, is to increase enjoyment of beauty, 726
 — germ of, 725
 Substance, 198
 — and attribute, distinction of, 585
 — conception of, 198
 Symbolical experience, sensory consciousness used twice over in, 667
 Symbolism may hinder spiritual experience, 746
 Sympathetic individuality the plan of man's nature, 556
 Sympathy, the magic of, 300, 462
 Taste, 75
 — basis of, the aggregation of consciousness, 285
 — the principle of, 717
 Temptation, phenomena of, 674
 — struggle of, 338, 345, 347, 357
 Terms, technical, inadequacy of, to describe higher consciousness, 77, 245, 350
 Thinking, accumulated reverberatory stir in, 170
 — how defective, 140
 — incoherency in, explanation of, 176
 — mode of, 106, 107, 115
 Theology, plan of this Treatise does not include inquiry into, 570
 Time conditioned by our incommensurateness, 640, 679
 — how conception of, arises, 582
 — how we guess lapse of, 205
 Touch, apparatus of, 32
 Tragedy, use of, 756
 Truth, the criterion of, 603
 Truthfulness, reason for high value of, 416

INDEX.

- Ugliness implies disintegration of consciousness, 296
- Unconsciousness, the mode of, 225
- Uniformity, expectation of, in Nature, 604
- Utilitarianism, 435, 451
— defective as a standard for the individual, 452
- Variability, 491, 494
- Verification, 199, 212
- Vibration, the term finally needs reconstruing, 641
- Virtue, principle of, 434
- Vitality, 488
- Volitions, 199
- Will, the, and Aspiration, 319, 324
— and the Categorical Imperative, 363
— and the Nervous System, 325
— behaviour between willings partially calculable, 329
— can man's doings be his own virtually, though not really? 336
— connection between thought and bodily movement, 311
— connection of, with Pleasure and Pain, 313
— freedom of, means better definition of personality, 342
— in Conduct thinking suspends habitual energising, 318
- Will, in its highest sense only enlargement of process 318
— in lower order of volition ideation stops, 318
— is improvement in structure evolutional or supernatural 346
— leaves man not arbitrary, but a moral creature, 366
— non-aspiration equivalent to physical effect, 343
— popular belief in man voluntarily having executive power, 334
— relation of, to Conscience, 358
— 362
— relation of, to the Passions 318
— religious men assert their deficiency in volitional or executive power, 336
— size, etc., of alleged increments of Energy, 325
— the evidence given by Consciousness, 333
— the mathematical problem of 324, 332, 346
— the scientific objection as to increase of Force, 320, 365
— two meanings of the term, 312
— volitional efficacy progressive, acquired, 312
— what it implies, 301



150/CYP



2339

